

# Rationale for and Science of Emerging Clinical and Recovery Support Services

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Massachusetts General Hospital  
Harvard Medical School

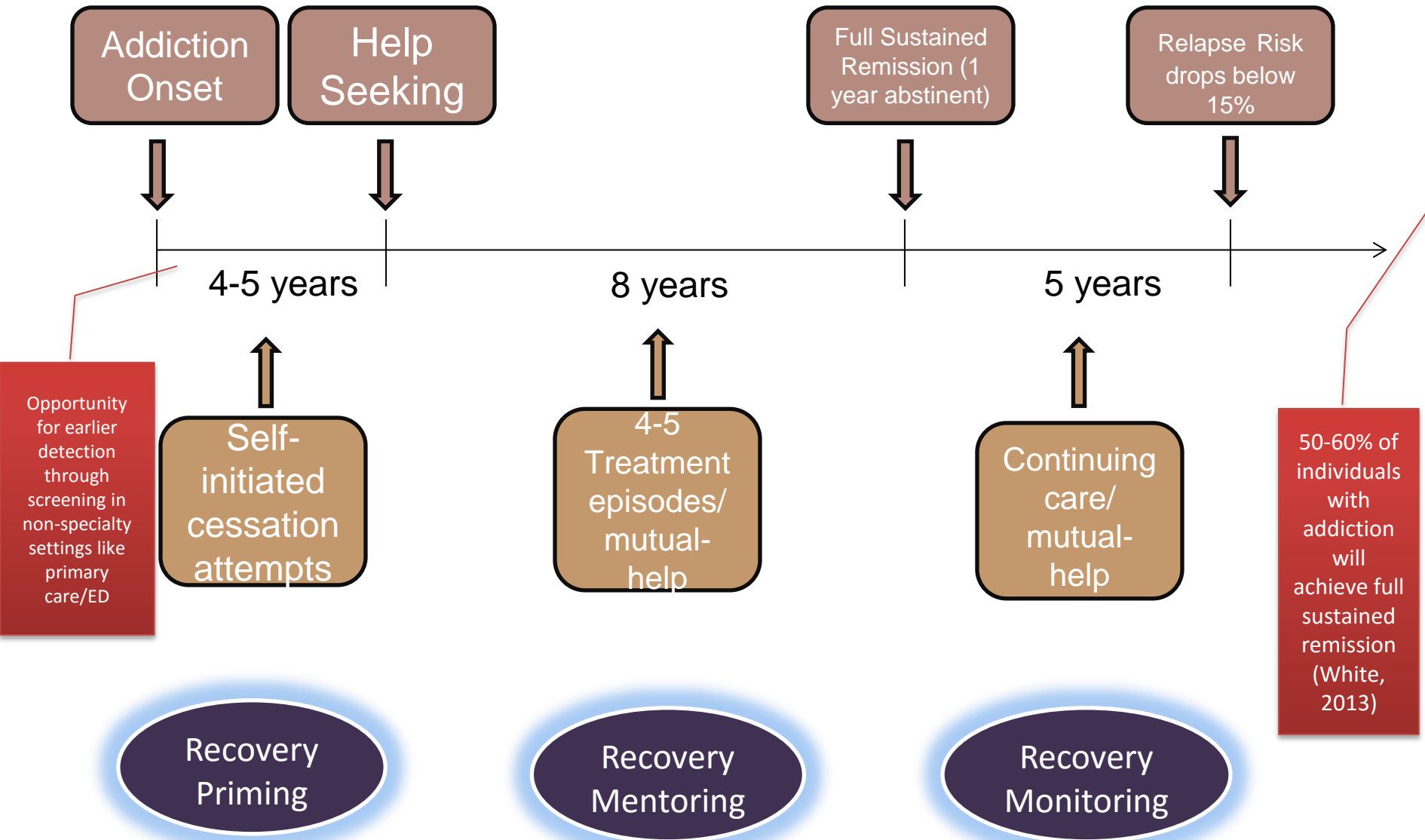
13<sup>th</sup> Annual METH Conference, Caspar, WY April, 2016



# Key points

- Addiction remission can take time and even after full remission remains susceptible to relapse for many years
- Recovery is physiologically and psychologically stressful and demanding
- We can influence the chances of sustained remission & recovery by decreasing stress/boosting stress-coping
- Recovery support services are designed to do this; there are existing examples; and new entities emerging

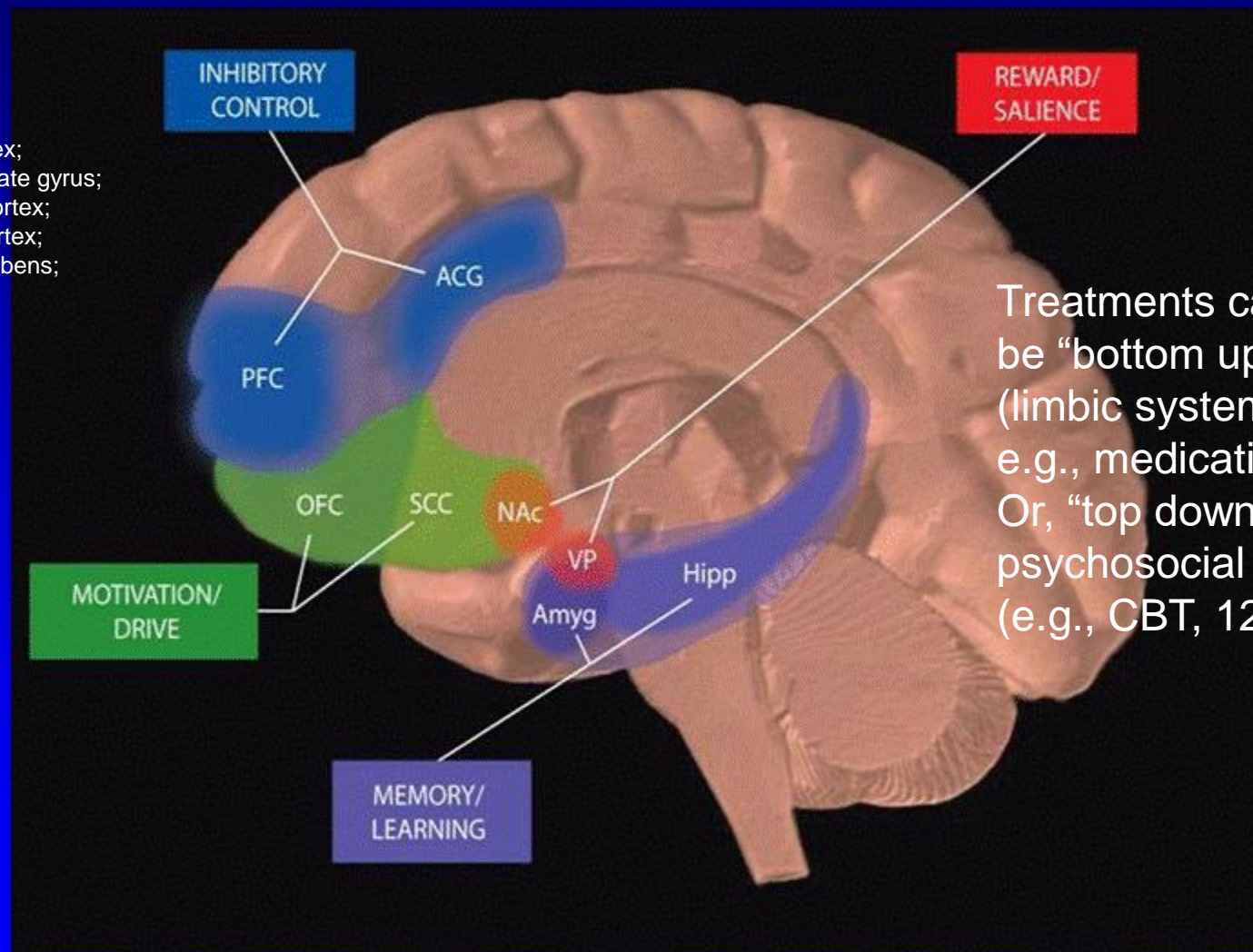
What we do know is that for more severely dependent individuals ...  
course of dependence and achievement of stable recovery  
can take a long time ...



# *Circuits Involved In Drug Abuse and Addiction*

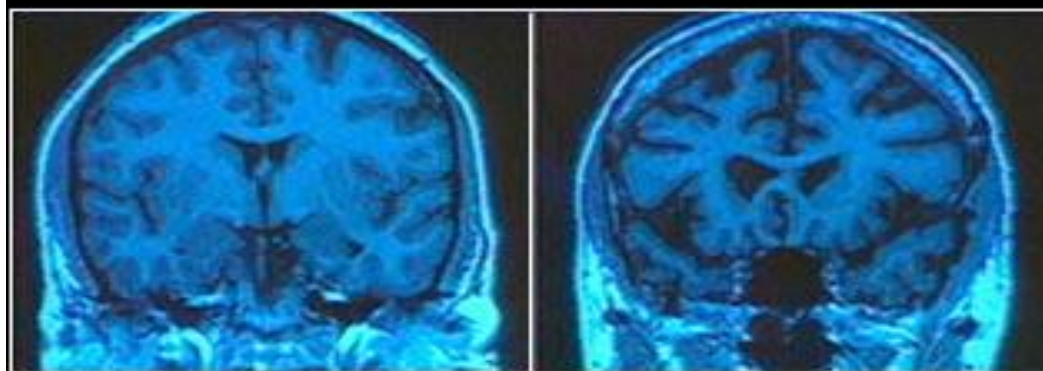
## Key:

PFC – prefrontal cortex;  
ACG – anterior cingulate gyrus;  
OFC – orbitofrontal cortex;  
SCC – subcallosal cortex;  
NAc – nucleus accumbens;  
VP – ventral pallidum;  
Hipp – hippocampus;  
Amyg – amygdala.



Treatments can be “bottom up” (limbic system; e.g., medications) Or, “top down” psychosocial treatments (e.g., CBT, 12-step)

**All of these brain regions must be considered in developing strategies to effectively treat addiction**



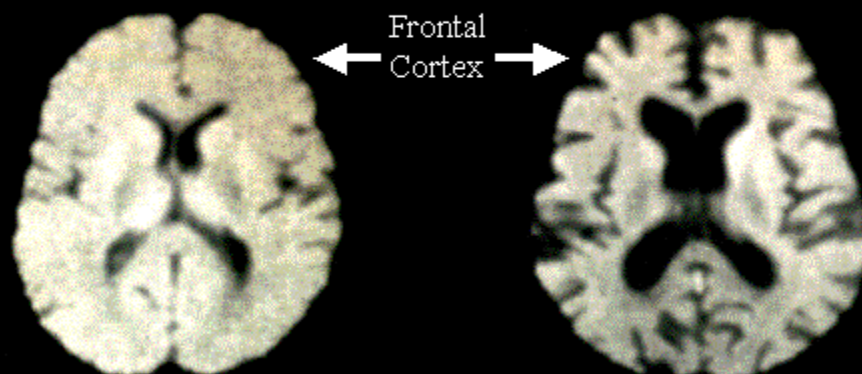
Normal  
43-year-old

Alcoholic  
43-year-old

## HUMAN BRAIN IMAGES

Moderate Drinker

Alcoholic



Axial magnetic resonance images from a healthy 57-year-old man (left) and a 57-year-old man with a history of alcoholism (right). D. Pfefferbaum

# Physiological Theories

## General Adaptation Syndrome (Selye, 1956)

Alarm---- Resistance---Exhaustion

# Protracted/post-acute withdrawal effects:

More stress and lowered ability to experience normal pleasures

- Increased sensitivity to stress via...
  - Increased activity in hypothalamic-pituitary-adrenal axis (HPA-axis) and CRF/Cortisol release
- Lowered ability to experience normal levels of reward via...
  - Down-regulated dopamine D2 receptor activity increasing risk of protracted dysphoria/anhedonia



# Bi-axial Formulations of Addiction and Recovery

## Recovery Capital:

Achievement of sustained recovery from alcohol or other drug use disorders is not just a function of medical stabilization (e.g. detox) or addressing short-term deficits and psychopathology, but also by building and successfully mobilizing personal, social, and environmental resources that can be brought to bear on maintaining remission and long-term recovery.

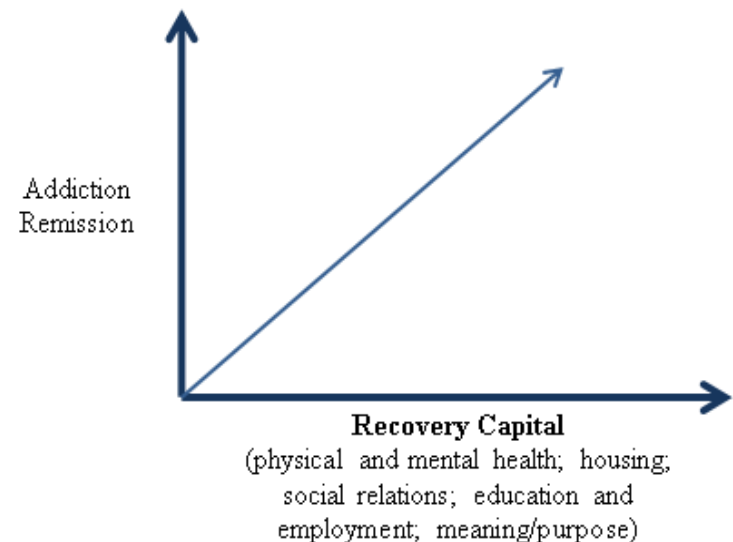
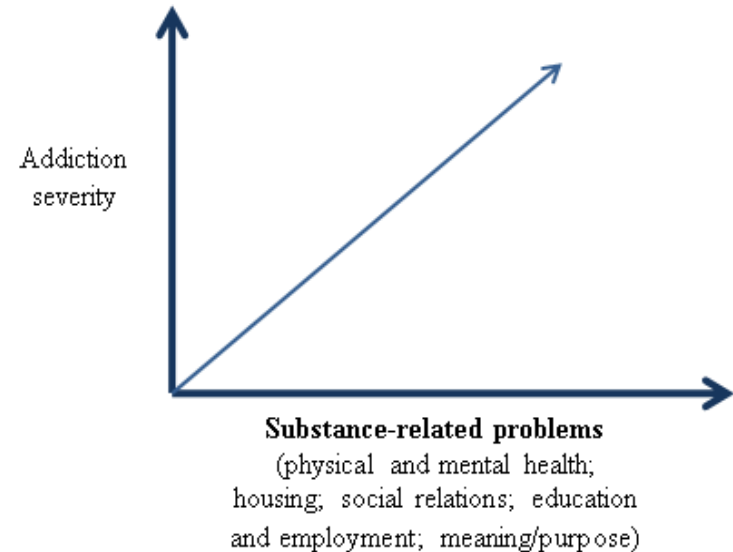
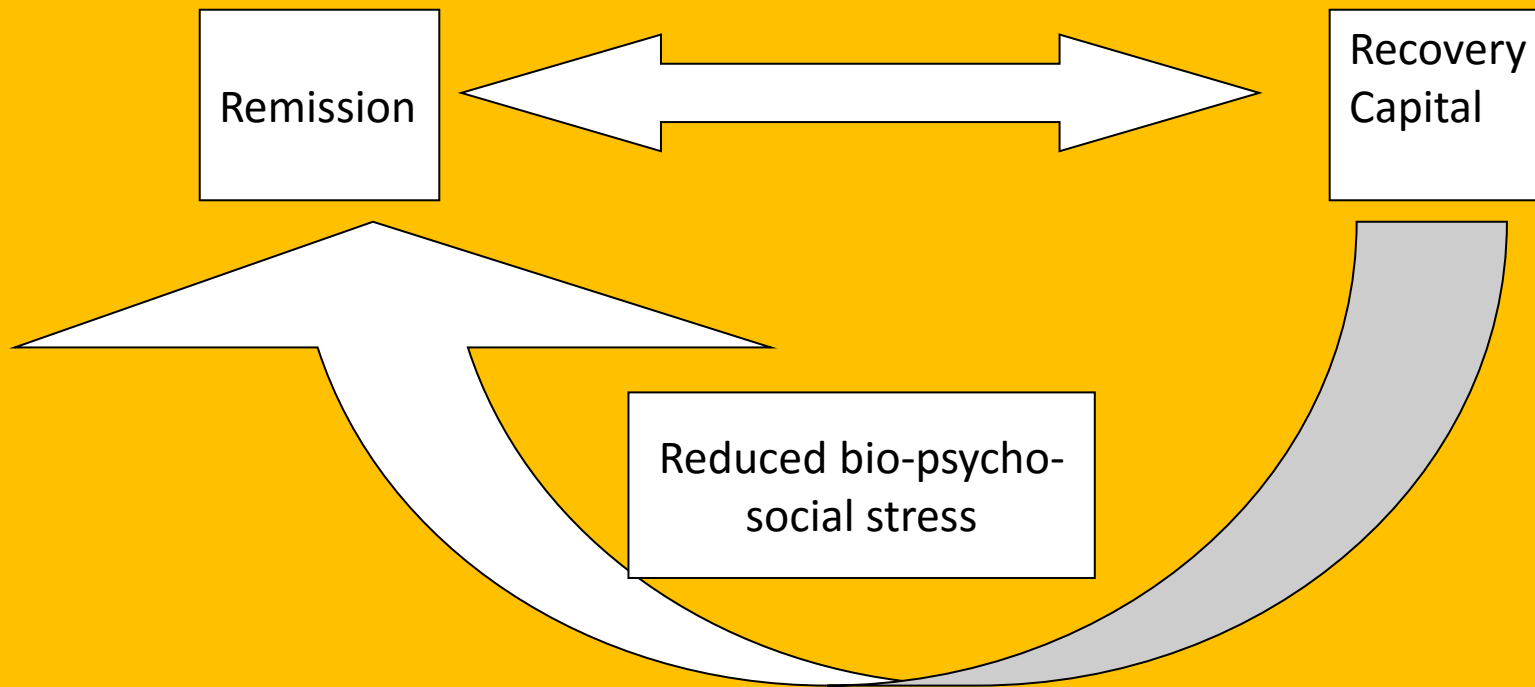




Figure 1. Reciprocal relationship between remission and recovery capital.



Longer remission results in greater accrual of recovery capital; in turn, greater recovery capital increases the chances of longer remission because it reduces biological, psychological, and social stress – a major pathway to relapse. Consequently, providing more recovery support will increase the chances of remission by reducing stress. Adapted from Kelly and Hoepfner (2014).

Clinically, we are trained to address the psychiatric and medical pathology; RSSs address recovery capital....

Example:

**Clinical Pathology:** Two 30 yr old men enter treatment with **clinically identical** levels of severity of opioid and alcohol addiction and psychiatric and medical problems and report the same level of distress and impairment

**Treatment Plan:** Patients are matched based on these clinical profiles to receive the **same** array of interventions to address clinical needs

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But....

**Recovery Capital:**

One man is single, he's from a neighborhood that has a high crime rate/drug and alcohol-related arrests; he didn't graduate High School, has a father with active AUD with whom he lives, and is unemployed with a criminal record.

The other is from a low crime neighborhood, is married with two children, a supportive family, has a master degree and is employed as an engineer with a good job and income. His father has 17yrs of sobriety in AA.

Which is more likely to stay sober?

Move from a "Treatment Plan" to "Recovery Plan" based on pathology AND available recovery capital

# Recovery Support Service



# Recovery Support Service Metaphor



# Recovery Support Service Metaphor



# Recovery Support Services

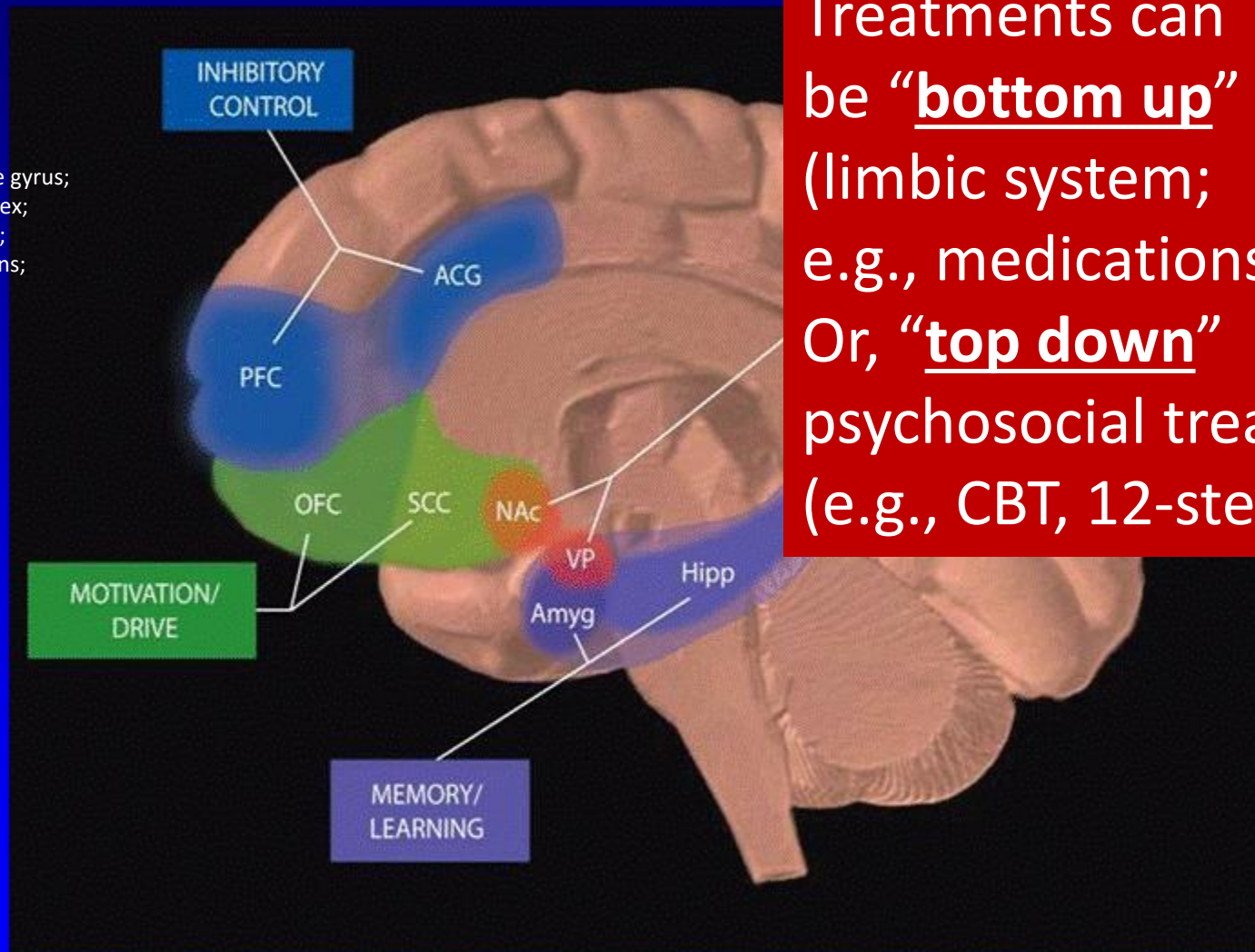




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# Psychosocial Theories of Remission and Recovery?

- Studies of treatment are often theory-based (e.g, Longabaugh and Morgenstern, 2002; Moos, 2007)
- However, studies of SUD recovery are very seldom theory-based
- But, there are empirically supported theories that help explain the onset of substance use and SUD
- These same theories may be useful in helping explain SUD remission and recovery...

# Parallels in the onset and offset of SUD

People want to use substances for 4 main reasons (NIDA, 2005):
To feel <u>good</u>
To feel <u>better</u>
To <u>do</u> better
Because <u>others</u> are doing it

# Parallels in the onset and offset of SUD

People want to use substances for 4 main reasons (NIDA, 2005):	People want to <u>stop using</u> substances and <u>recover</u> for the same 4 main reasons:
To feel <u>good</u>	To feel <u>good</u>
To feel <u>better</u>	To feel <u>better</u>
To <u>do</u> better	To <u>do</u> better
Because <u>others</u> are doing it	Because <u>others</u> are doing it

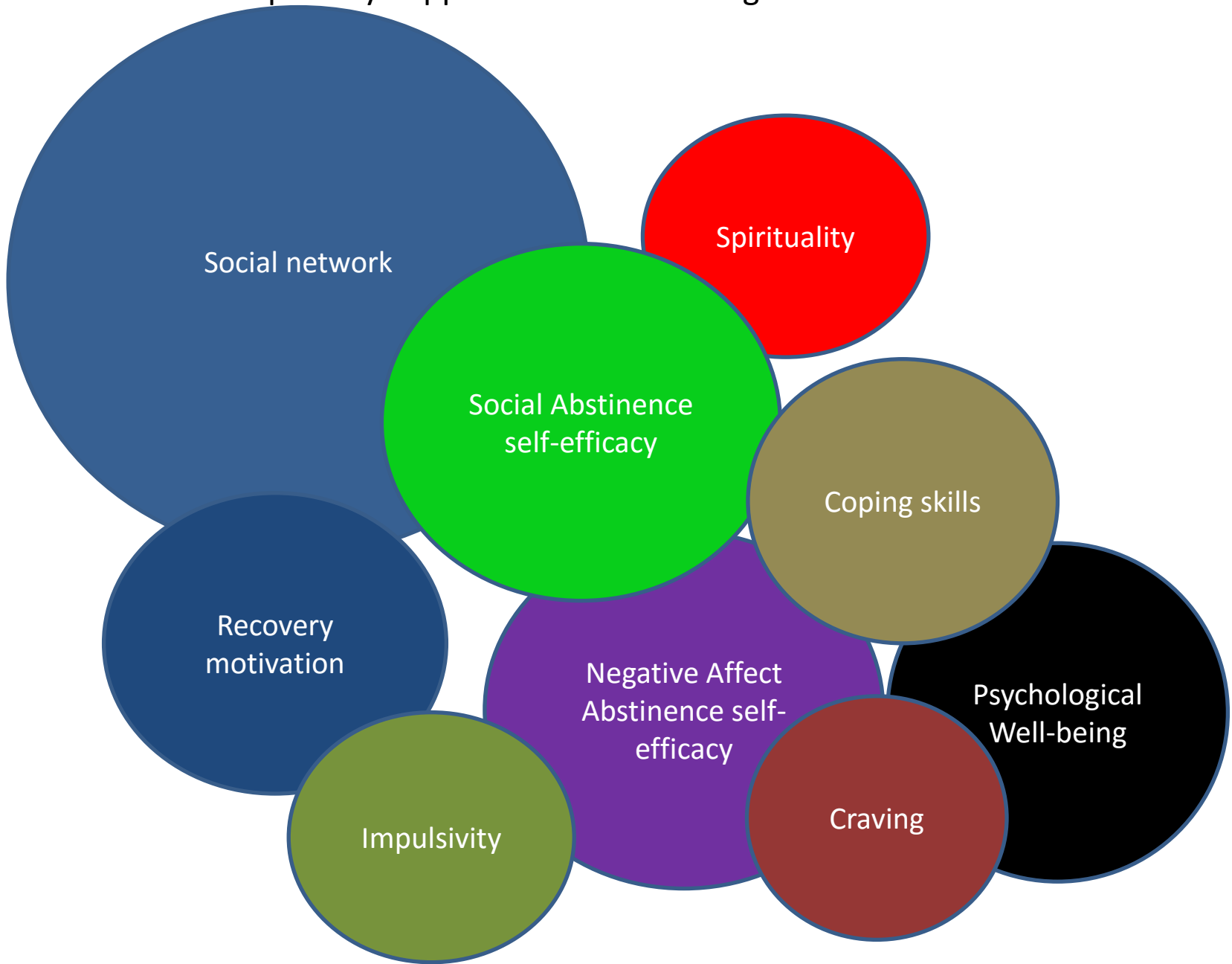
Theory	Key process mechanisms for...	
	Substance use	Recovery
<b>Social Control</b>	Lack of strong bonds with family, friends, work, religion, other aspects traditional society	Goal-direction, structure and monitoring, shaping behavior to adaptive social bonds
<b>Social Learning</b>	Modeling and observation and imitation of substance use, social reinforcement for and expectations of positive consequences from use; positive norms for use	Social network composed of individuals who espouse abstinence, reinforce negative expectations about effects of substances, provide models of effective sober living
<b>Stress and coping</b>	life stressors (e.g., social/work/financial problems, phys/sex abuse) lead to substance use especially those lacking coping and avoid problems; substance use form of avoidance coping, self-medication	Effective coping enhances self-confidence and self-esteem
<b>Behavioral economics</b>	Lack of alternative rewards provided by activities other than substance use	Effective access to alternative, competing, rewards through involvement in educational, work, religious, social/recreational pursuits

# Addiction Recovery Support Services

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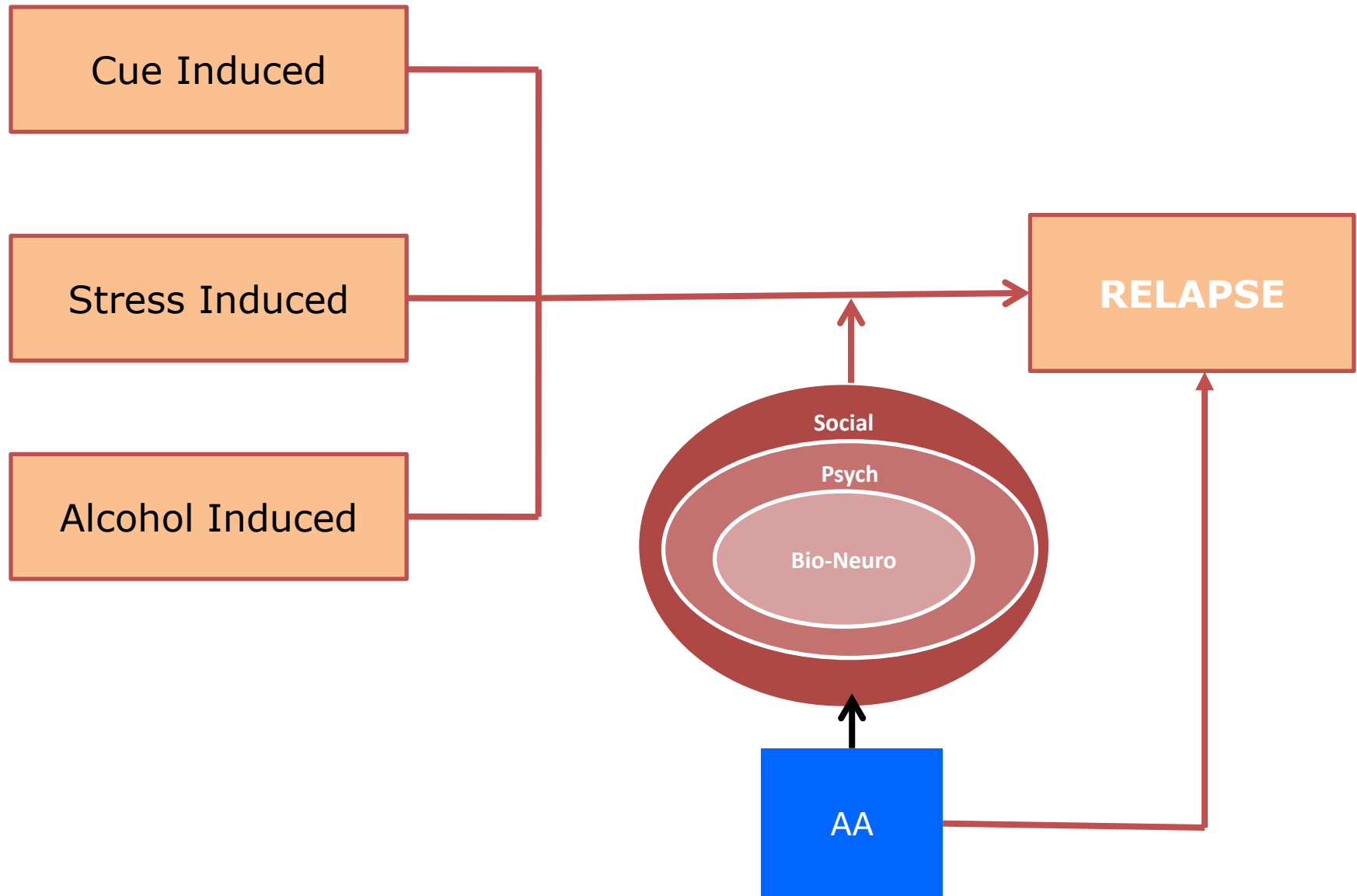
Source: Moos, RH (2011) Processes the promote recovery from addictive disorders.

# Empirically-supported MOBCs through which AA confers benefit

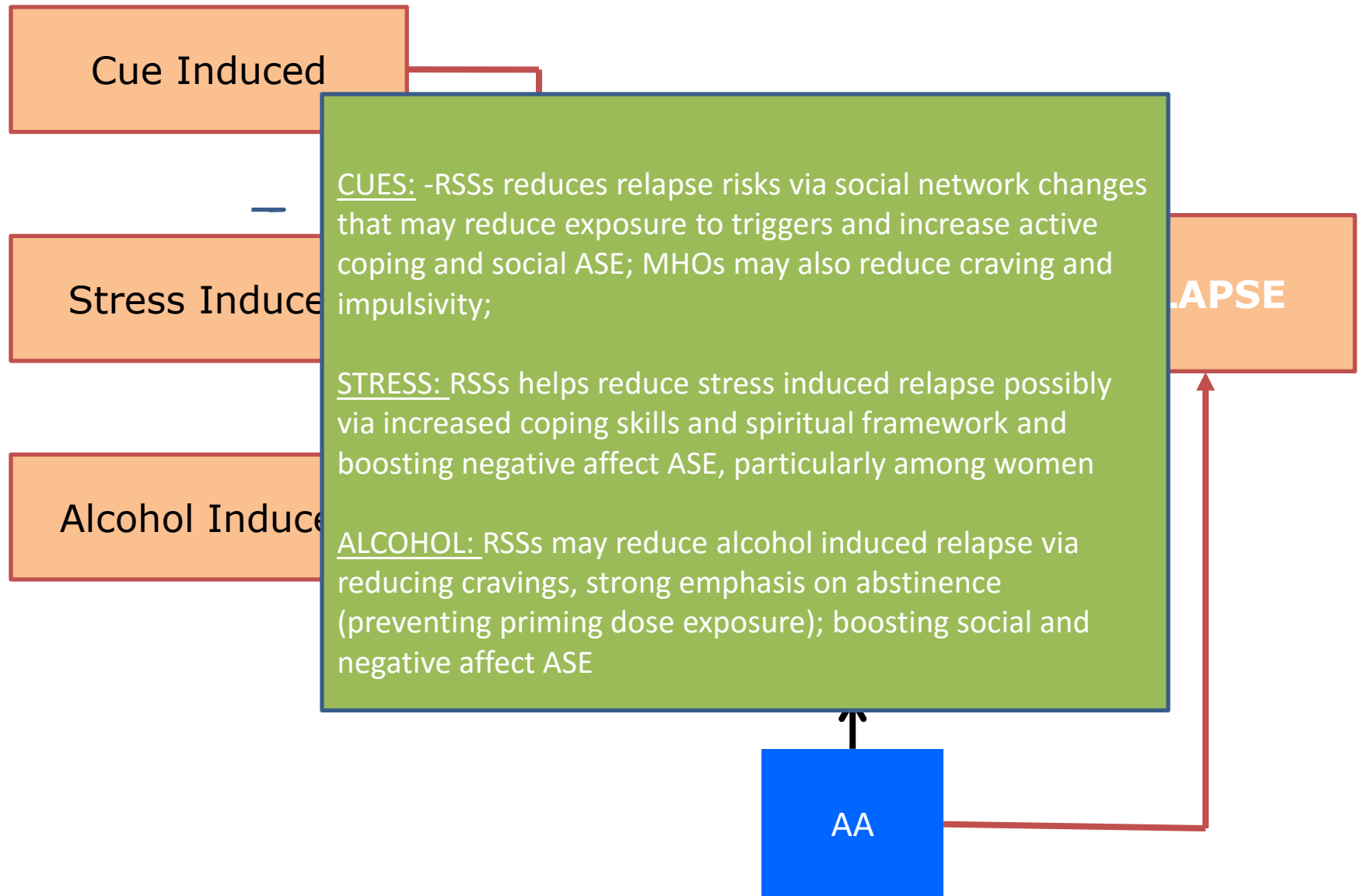




So, how might mutual help organizations reduce relapse risk and aid recovery?



## How might RSSs reduce relapse risk and aid recovery?



# Preventing relapse years into recovery...



Recovery motivation

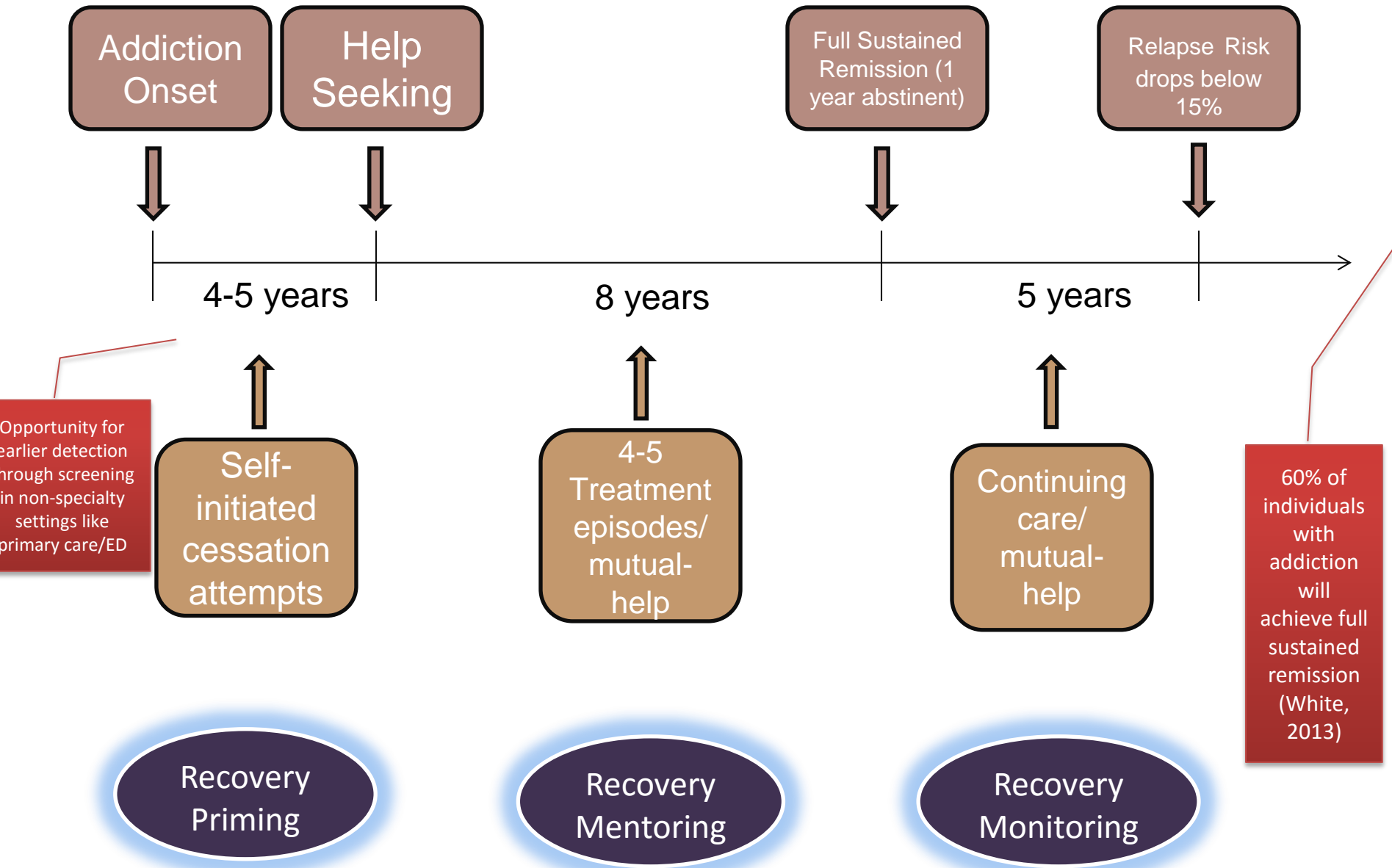
# The importance of re-motivation and prioritization

- Re-motivation
  - Like all chronic illnesses, critically important to remaining in remission is the notion of a clear recognition and acceptance that one has the illness, and that one is susceptible to relapse/reinstatement of the disorder over the long-term
  - One of the therapeutic functions of RSSs (e.g., AA/NA) is that meetings and social interactions with recovering persons facilitates constant re-exposure to aversive memories of past addictive behaviors (through hearing recounting of personal case histories) which can lie dormant, be suppressed, or naturally decay over time
  - Re-exposure to aversive memories coupled with evident observable success and positive attributes of other people in long-term recovery, leads to ongoing re-appraisals through a process of implicit decisional balance, that favors continued adherence and recovery

# Addiction as a chronic illness

What can science tell us regarding the need to address addiction as a chronic illness? For long term treatment? For recovery support services?

What we do know is that for more severely dependent individuals ...  
course of dependence and achievement of stable recovery  
can take a long time ...



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### **Recovery Capital:**

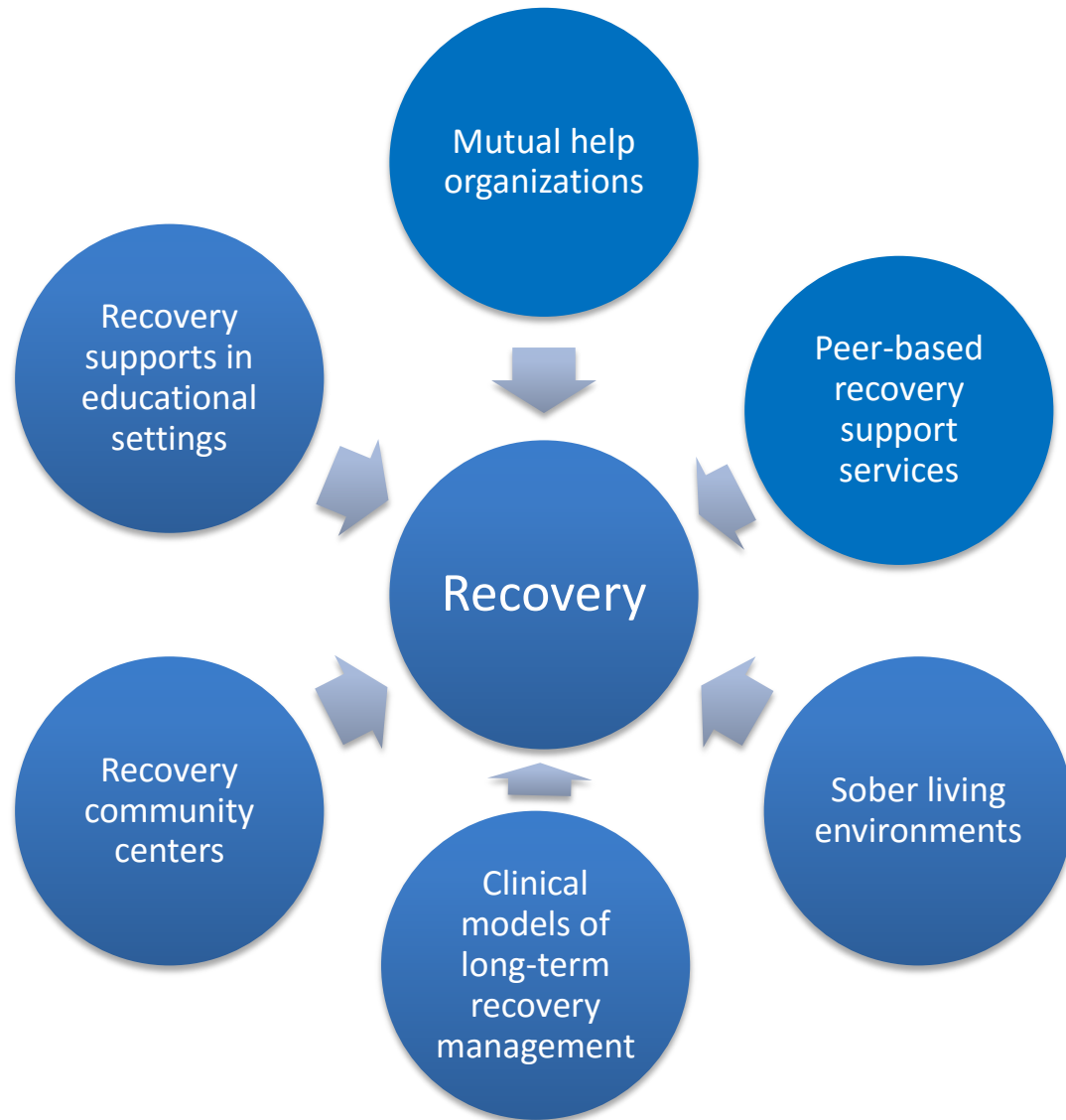
One man is single, he's from a neighborhood that has a high crime rate/drug and alcohol-related arrests; he didn't graduate High School, has a father with active AUD with whom he lives, and is unemployed with a criminal record.

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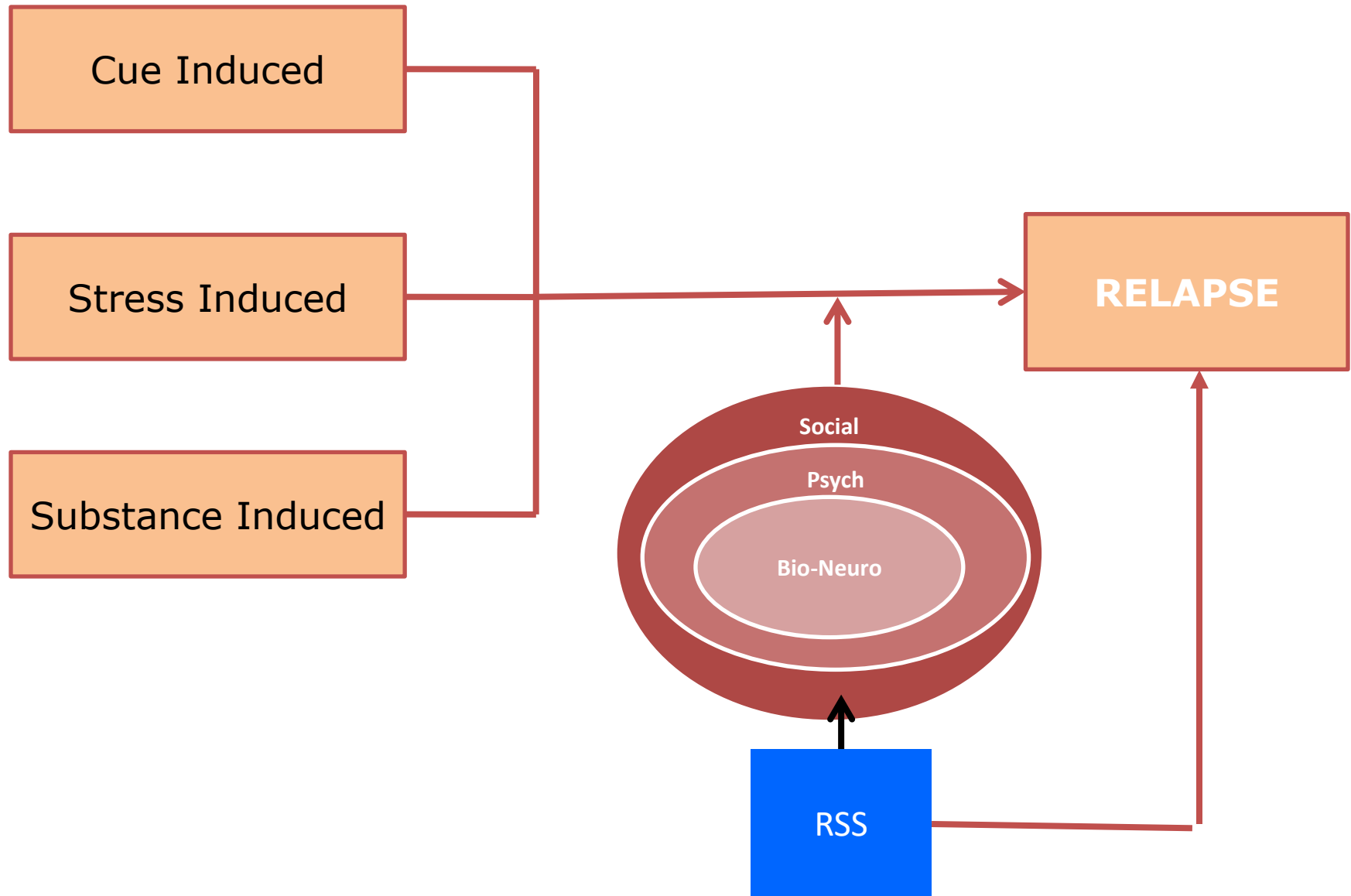
If stress, and cues are two of the most common precursors to relapse, which is more likely to stay sober?

Move from a "Treatment Plan" to "Recovery Plan" based on pathology AND available recovery capital

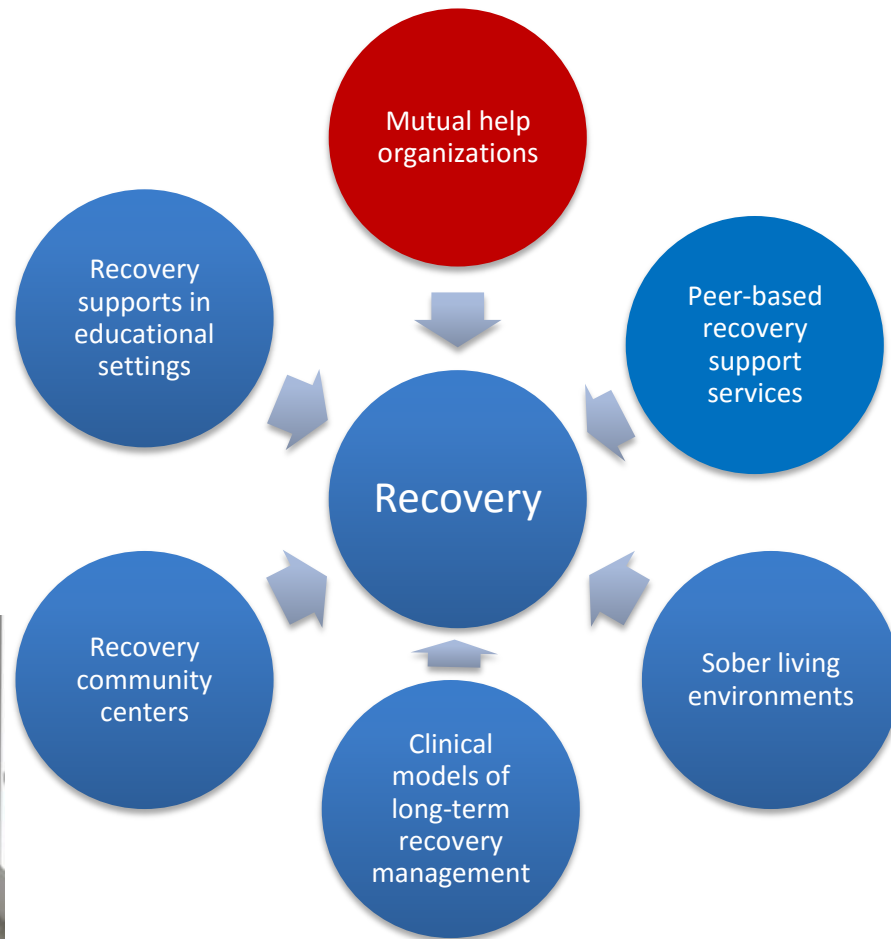
# Recovery Support Services



So, how might RSSs reduce relapse risk and aid recovery?



# Mutual help Organizations





# Substance Focused Mutual-help Groups

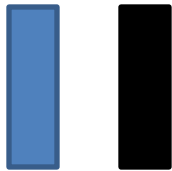
Name	Year of Origin	Number of groups in U.S.	Location of groups in U.S.
<b>Alcoholics Anonymous (AA)</b>	1935	56,000	all 50 States
<b>Narcotics Anonymous (NA)</b>	1940s	Approx. 15,000	all 50 States
<b>Cocaine Anonymous (CA)</b>	1982	Approx. 2000 groups	most States; 6 online meetings at <a href="http://www.ca-online.org">www.ca-online.org</a>
<b>Methadone Anonymous (MA)</b>	1990s	Approx. 100 groups	25 States; online meetings at <a href="http://methadone-anonymous.org/chat.html">http://methadone-anonymous.org/chat.html</a>
<b>Marijuana Anonymous (MA)</b>	1989	Approx. 200 groups	24 States; online meetings at <a href="http://www.ma-online.org">www.ma-online.org</a>
<b>Rational Recovery (RR)</b>	1988	No group meetings or mutual helping; emphasis is on <i>individual</i> control and responsibility	-----
<b>Self-Management and Recovery Training (S.M.A.R.T. Recovery)</b>	1994	Approx. 500 groups	40 States; 19 online meetings at <a href="http://www.smartrecovery.org/meetings/olschedule.htm">www.smartrecovery.org/meetings/olschedule.htm</a>
<b>Secular Organization for Sobriety, a.k.a. Save Ourselves (SOS)</b>	1986	Approx. 500 groups	all 50 States; Online chat at <a href="http://www.sossobriety.org/sos/chat.htm">www.sossobriety.org/sos/chat.htm</a>
<b>Women for Sobriety (WFS)</b>	1976	150-300 groups	Online meetings at <a href="http://groups.msn.com/WomenforSobriety">http://groups.msn.com/ WomenforSobriety</a>
<b>Moderation Management (MM)</b>	1994	Approx. 18 face-to-face meetings	12 States; Most meetings are online at <a href="http://www.angelfire.com/trek/mmchat/">www.angelfire.com/trek/mmchat/</a> ;

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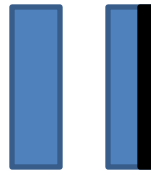
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# TSF Delivery Modes

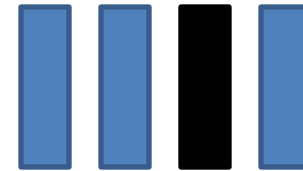
Stand alone  
Independent therapy



Integrated into an existing  
therapy



Component of a treatment  
package (e.g., an  
additional group)



As Modular appendage  
linkage component



In past 25 years, MHO research has gone from contemporaneous correlational research to rigorous RCTs and ...



## Facilitating involvement in Alcoholics Anonymous during out-patient treatment: a randomized clinical trial

Kimberly S. Walitzer, Kurt H. Dermen & Christopher Barrick

Research Institute on Addictions/University at Buffalo, The State University of New York, Buffalo, NY, USA

*Addiction* (1998) 93(9), 1313–1333

### RESEARCH REPORT

## Network support for drinking Anonymous and long-term

RICHARD LONGABAUGH<sup>1</sup>, PHILIP W. WIRTZ<sup>2</sup>,  
ALLEN ZWEBEN<sup>3</sup> & ROBERT L. STOUT<sup>4</sup>

<sup>1</sup>Brown University, Center for Alcohol & Addiction Studies, Providence, RI,

<sup>2</sup>George Washington University, Washington, DC, <sup>3</sup>University of Wisconsin-Milwaukee, Center for Addiction & Behavioral Health Research, Milwaukee, WI, <sup>4</sup>Brown University and Butler Hospital, Center for Alcohol & Addiction Studies, Providence, RI, USA

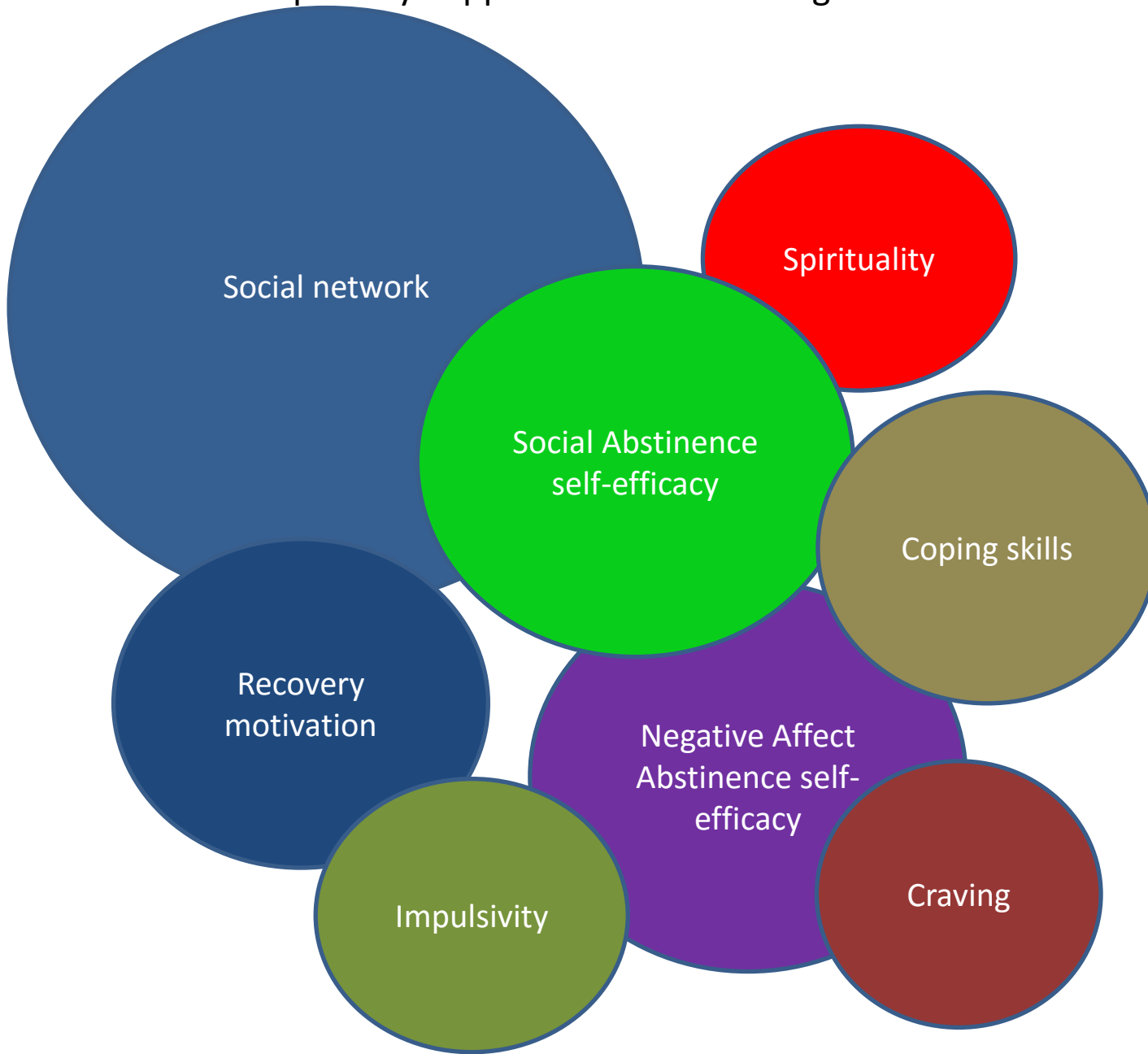
### Abstract

**Aims.** (1) To examine the matching hypothesis that Twelve Step Facilitation Therapy (TSF) is more

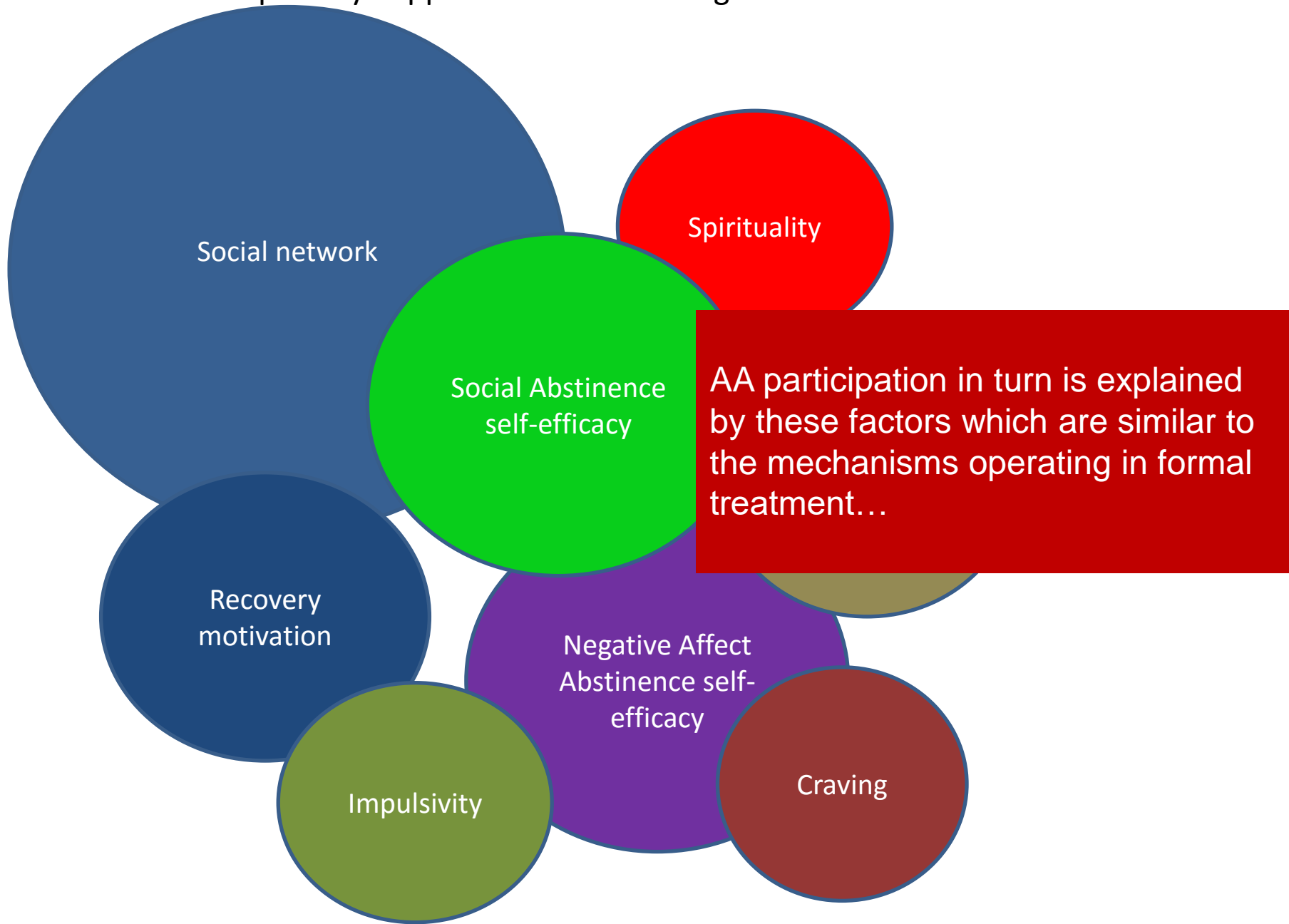
TSF often produces significantly better outcomes relative to active comparison conditions (e.g., CBT)

Although TSF is not “AA”, its beneficial effect is explained by AA involvement post-treatment.

# Empirically-supported MOBCs through which AA confers benefit



## Empirically-supported MOBCs through which AA confers benefit

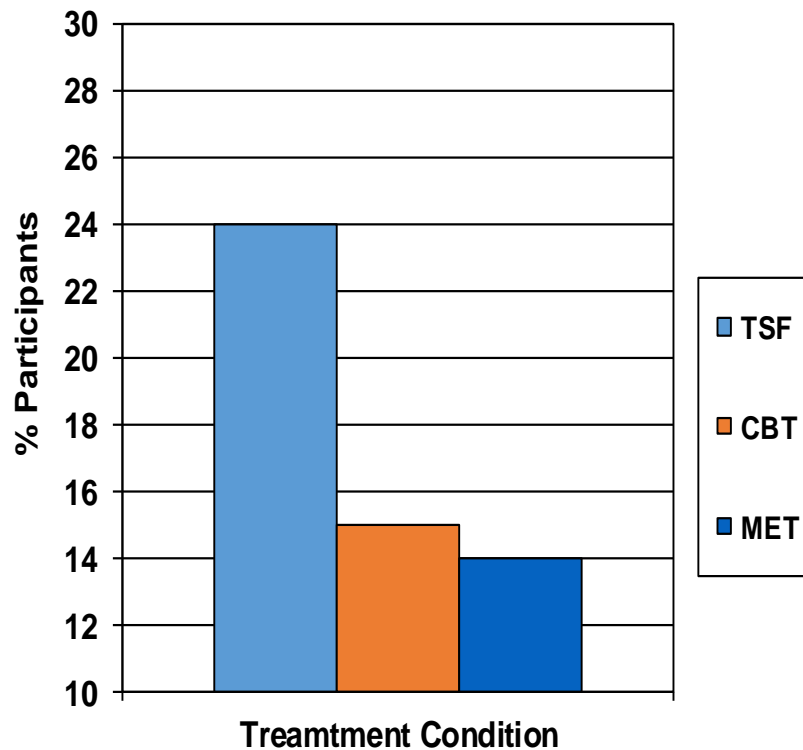


# Linkage to MHO like AA can lead to much higher rates of full sustained remission

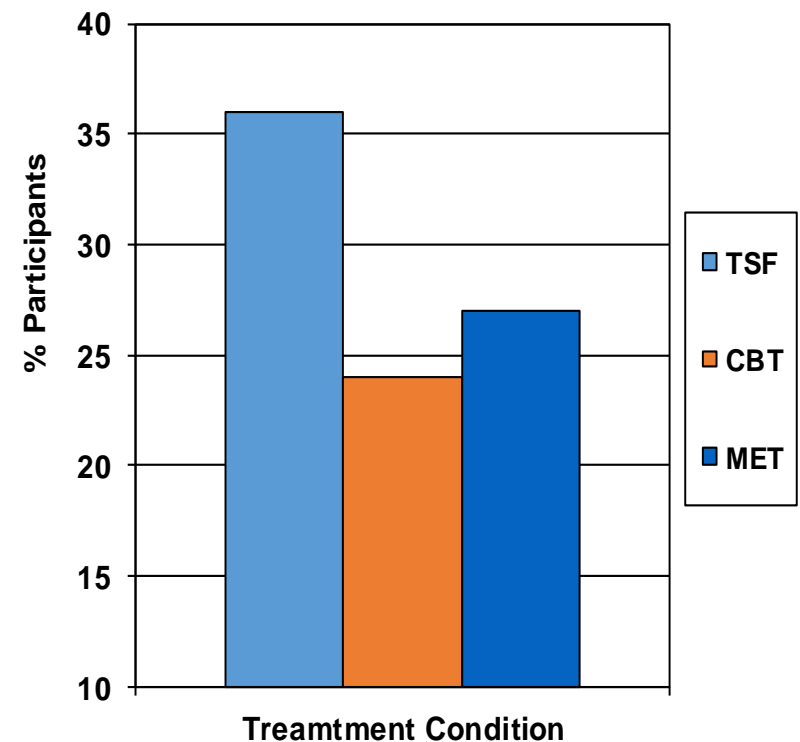
(Project MATCH, 1997)

**TSF treatment can lead to much higher rates of full sustained remission**

**Continuous Abstinence Rates during year following treatment (4-15 Months)**



**Continuous Abstinence Rates past 90 days- 3 Years**



# COMPILATION OF PATIENT PROTECTION AND AFFORDABLE CARE ACT

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[As Amended Through May 1, 2010]

INCLUDING

PATIENT PROTECTION AND AFFORDABLE CARE ACT  
HEALTH-RELATED PORTIONS OF THE HEALTH CARE AND  
EDUCATION RECONCILIATION ACT OF 2010

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PREPARED BY THE  
Office of the Legislative Counsel  
FOR THE USE OF THE  
U.S. HOUSE OF REPRESENTATIVES



MAY 2010

APPROVED

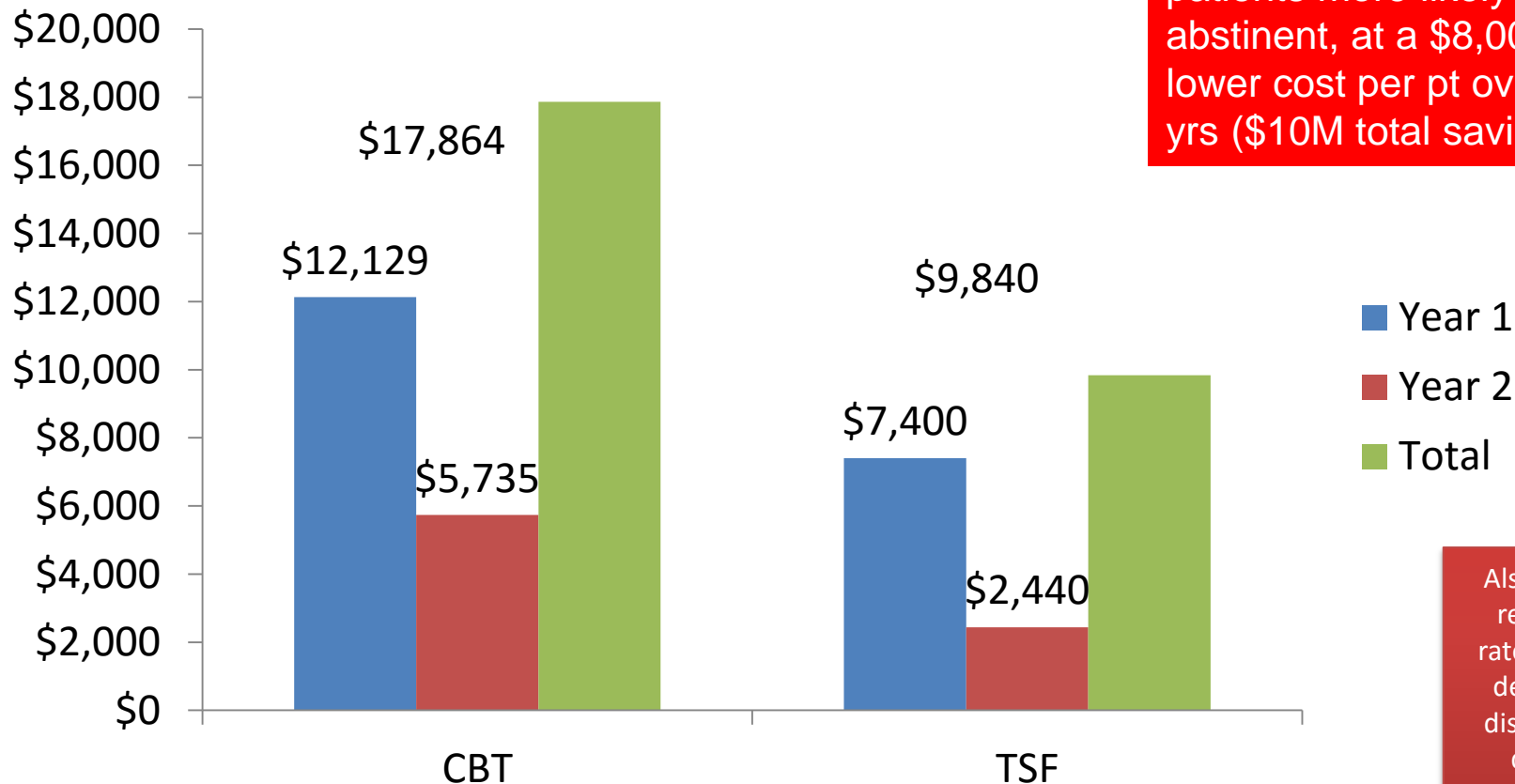
MAR 23 2010

*Barack Obama*

# HEALTH CARE COST OFFSET

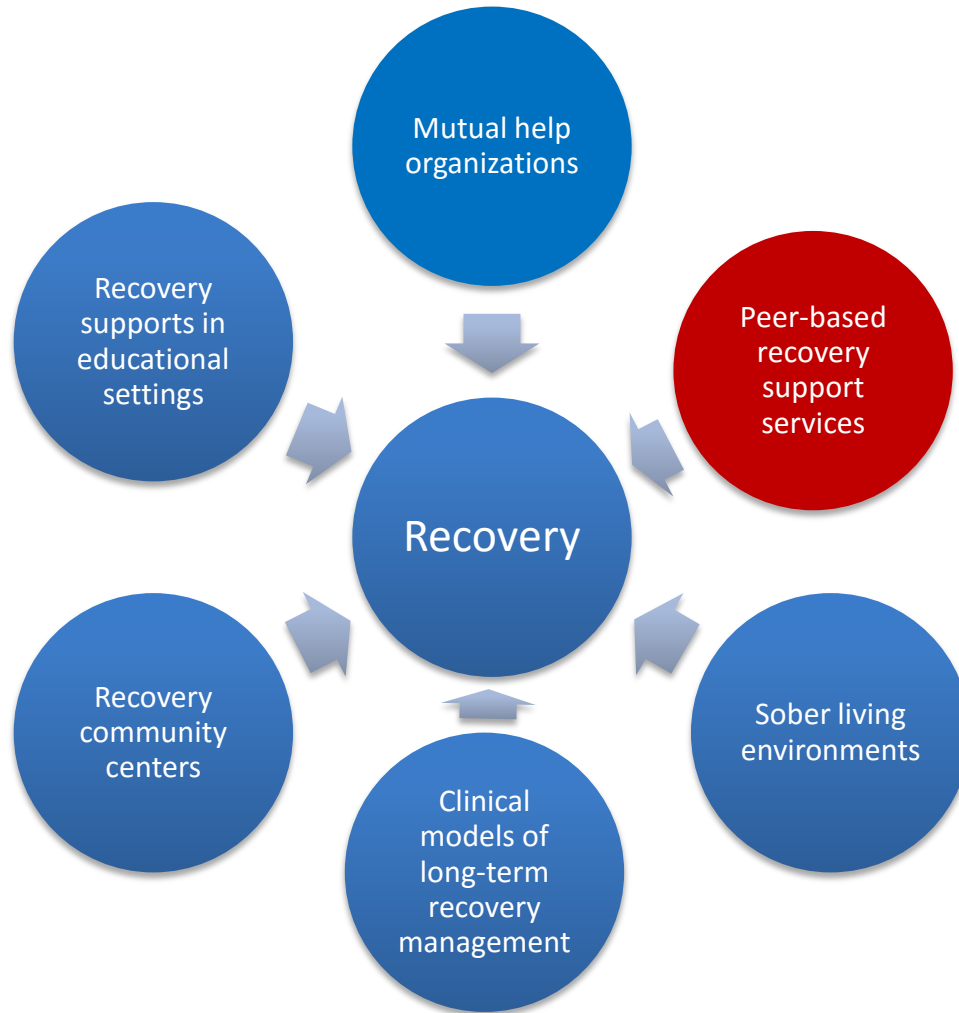
## CBT VS 12-STEP RESIDENTIAL TREATMENT

Compared to CBT-treated patients, 12-step treated patients more likely to be abstinent, at a \$8,000 lower cost per pt over 2 yrs (\$10M total savings)



Also, higher remission rates, means decreased disease and deaths, increased quality of life for sufferers and their families

# Peer-based Recovery Support Services



# Formal Peer Support: Recovery Coaching

- Interacting with peers who have the lived experience of addiction and successful long-term recovery and how are supportive of recovery may help reduce relapse risk. They can facilitate...
  - Acquisition of coping skills
  - Increases in abstinence self-efficacy
  - Maintenance of recovery motivation
  - Serve as a healthy recovery role model and social contact
  - Provide community service
  - linkages and emotional support

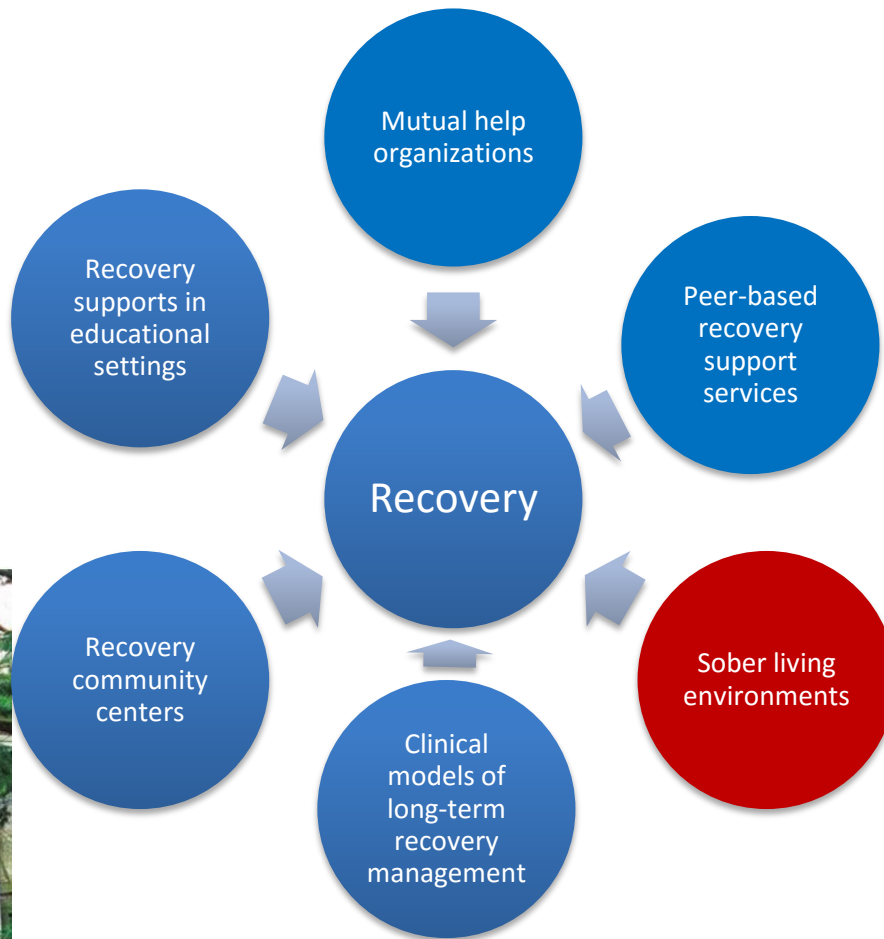




# Recovery Case Management

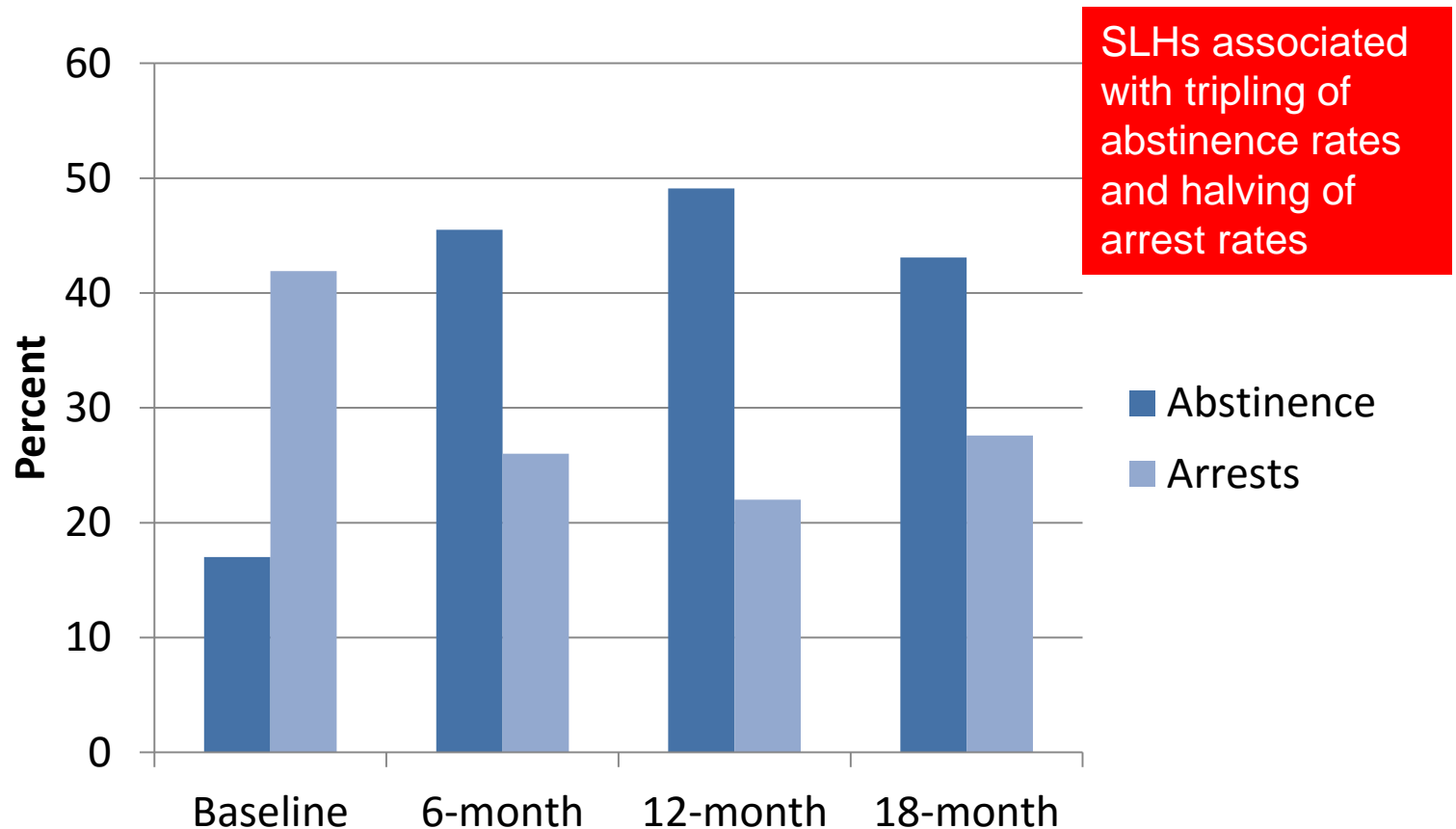
- Homeless individuals randomized to receive intensive case management experienced better outcomes for monthly income and employment, housing stability, and substance use at 2 year follow-up (Cox et al., 1998)
- In a cohort of people who inject drugs seeking treatment, individuals randomized to receive a case manager were more likely to:
  - Be admitted to a treatment program (98% vs. 57%)
  - Be admitted sooner (17 days on average versus 188 days)
  - Remain in treatment longer (27 months versus 14 months) (Mejta, Bokos, Mickenberg, Maslar, & Senay, 1997)

# Sober Living Environments Peer Run/Self-Governing



# Sober Living Homes

## Outcomes for residents in free standing SLHs



# Societal Benefits of Oxford Houses

- **Sample:** 150 individual completing treatment in the Chicago metropolitan area
- **Design:** Randomized controlled trial
- **Intervention:** Oxford House vs. community-based aftercare services (usual care)
- **Follow-up:** 2 years
- **Outcome:** Substance use, monthly income, incarceration rates



FIELD ACTION REPORT

## Communal Housing Settings Enhance Substance Abuse Recovery

| Leonard A. Jason, PhD, Bradley D. Olson, PhD, Joseph R. Ferrari, PhD, and Anthony T. Lo Sasso, PhD

Oxford Houses are democratic, mutual help-oriented recovery homes for individuals with substance abuse histories. There are more than 1200 of these houses in the United States, and each home is operated independently by its residents, without help from professional staff.

In a recent experiment, 150 individuals in Illinois were randomly assigned to either an Oxford House or usual-care condition (i.e., outpatient treatment or self-help groups) after substance abuse treatment discharge. At the 24-month follow-up, those in the Oxford House condition compared with the usual-care condition had significantly lower substance use, significantly higher monthly income, and significantly lower incarceration rates. (*Am J Public Health*. 2006;96:1727–1729. doi:10.2105/AJPH.2005.070839)

# Oxford House vs. Usual Care



# Economic benefits of Oxford House

- Gains in productivity
  - Oxford House participants **earned \$550 more per month** than usual care
  - In a single year, this equals **\$494,000 in additional production** for the entire Oxford House sample (N=129)
- Savings on incarceration
  - Illinois spends \$23,813 per year to incarcerate each drug offender
  - Factoring in lower incarceration rates for Oxford House participants corresponds to a savings of **\$119,000 per year**
- Combined benefit
  - Taken together, production and incarceration benefits yield approximately **\$613,000 in savings per year**
  - This savings is equivalent to **\$8,173 per Oxford House member**

# Cost-benefit analysis of the Oxford House Model

- **Sample:** 129 adults leaving substance use treatment between 2002 and 2005
- **Design:** Cost-benefit analysis using RCT data
- **Intervention:** Oxford House vs. usual continuing care
- **Follow-up:** 2 years
- **Outcome:** Substance use, monthly income, incarceration rates

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journal homepage: [www.elsevier.com/locate/evalprogplan](http://www.elsevier.com/locate/evalprogplan)



## Benefits and costs associated with mutual-help community-based recovery homes: The Oxford House model

Anthony T. Lo Sasso<sup>a,\*</sup>, Erik Byro<sup>b</sup>, Leonard A. Jason<sup>c</sup>, Joseph R. Ferrari<sup>d</sup>, Bradley Olson<sup>e</sup>

<sup>a</sup> Health Policy and Administration, School of Public Health, University of Illinois at Chicago, 1603 W Taylor, Chicago, IL 60660, United States

<sup>b</sup> Economics Department, University of Illinois at Chicago, 601 South Morgan UH725, Chicago, IL 60607, United States

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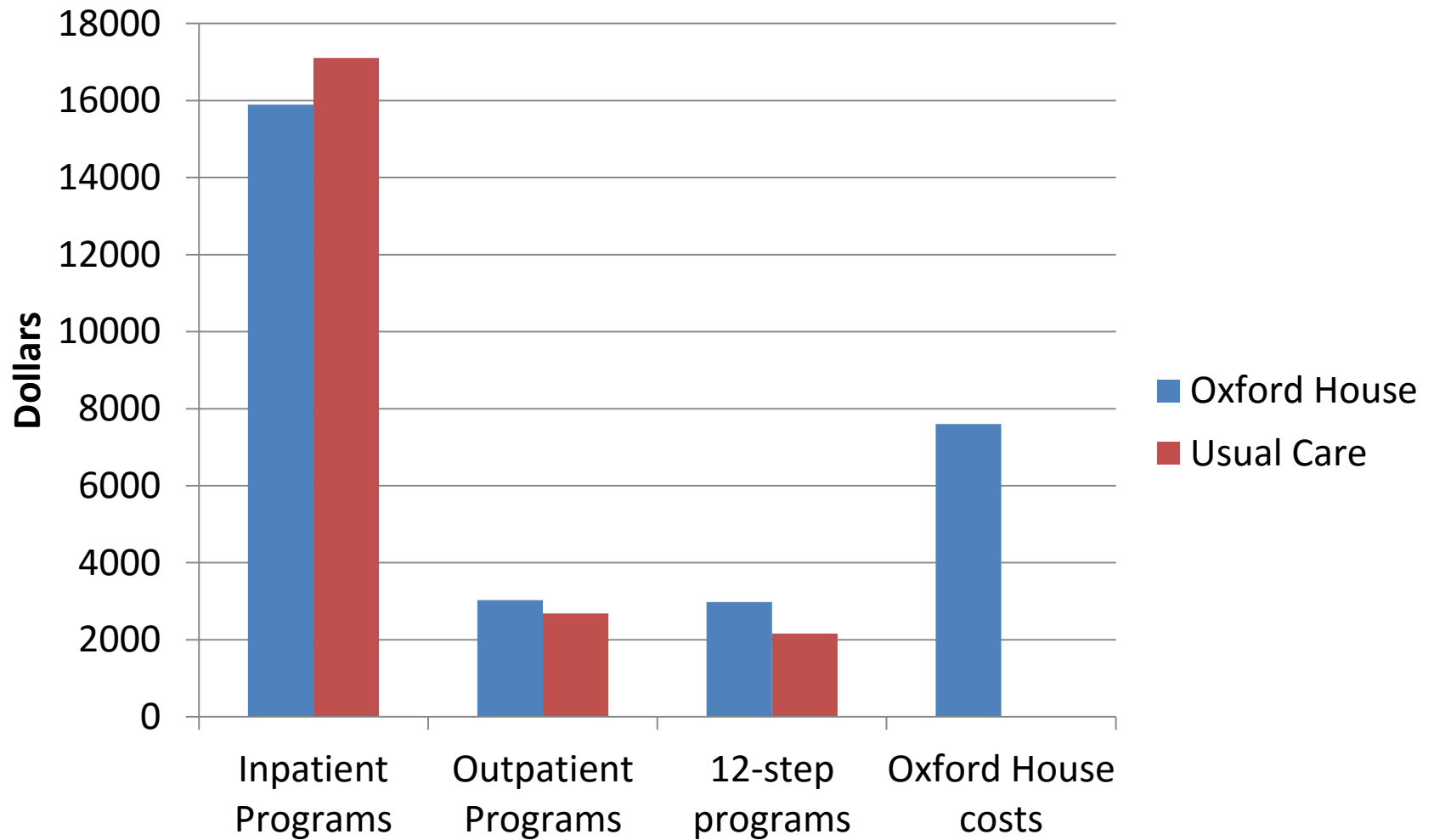
### ABSTRACT

We used data from a randomized controlled study of *Oxford House* (OH), a self-run, self-supporting recovery home, to conduct a cost-benefit analysis of the program. Following substance abuse treatment, individuals that were assigned to an OH condition ( $n = 68$ ) were compared to individuals assigned to a usual care condition ( $n = 61$ ). Economic cost measures were derived from length of stay at an Oxford House residence, and derived from self-reported measures of inpatient and outpatient treatment utilization. Economic benefit measures were derived from self-reported information on monthly income, days participating in illegal activities, binary responses of alcohol and drug use, and incarceration. Results suggest that OH compared quite favorably to usual care: the net benefit of an OH stay was estimated to be roughly \$29,000 per person on average. Bootstrapped standard errors suggested that the net benefit was statistically significant. Costs were incrementally higher under OH, but the benefits in terms of reduced illegal activity, incarceration and substance use substantially outweighed the costs. The positive net benefit for Oxford House is primarily driven by a large difference in illegal activity between OH and usual care participants. Using sensitivity analyses, under more conservative assumptions we still arrived at a net benefit favorable to OH of \$17,830 per person.

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# Total Treatment Costs





# Mean per-person societal benefits and costs



# Bottom Line

- The costs associated with Oxford House treatment are returned nearly tenfold in the form of:
  - ↓ Reduced criminal activity
  - ↓ Reduced incarceration
  - ↓ Reduced drug and alcohol use
  - ↑ Increased earnings from employment

# Clinical Models of Long-term Recovery Management



## Recover Management Check-ups

### 4-year outcomes from the Early Re-Intervention experiment using Recovery Management Checkups

- N=446 adults with SUD, mean age = 38, 54% male, 85% African-American
- randomly assigned to
  - quarterly assessment only
  - quarterly assessment plus RMC
- Recovery Management Checkups
  - Linkage manager who used motivational interviewing to review the participant's substance use, discuss treatment barrier/solutions, schedule an appointment for treatment re-entry, and accompany participant through the intake
  - If participants reported no substance use in the previous quarter, the linkage manager reviewed how abstinence has changed their lives and what methods have worked to maintain abstinence

# Recovery Management Checkups

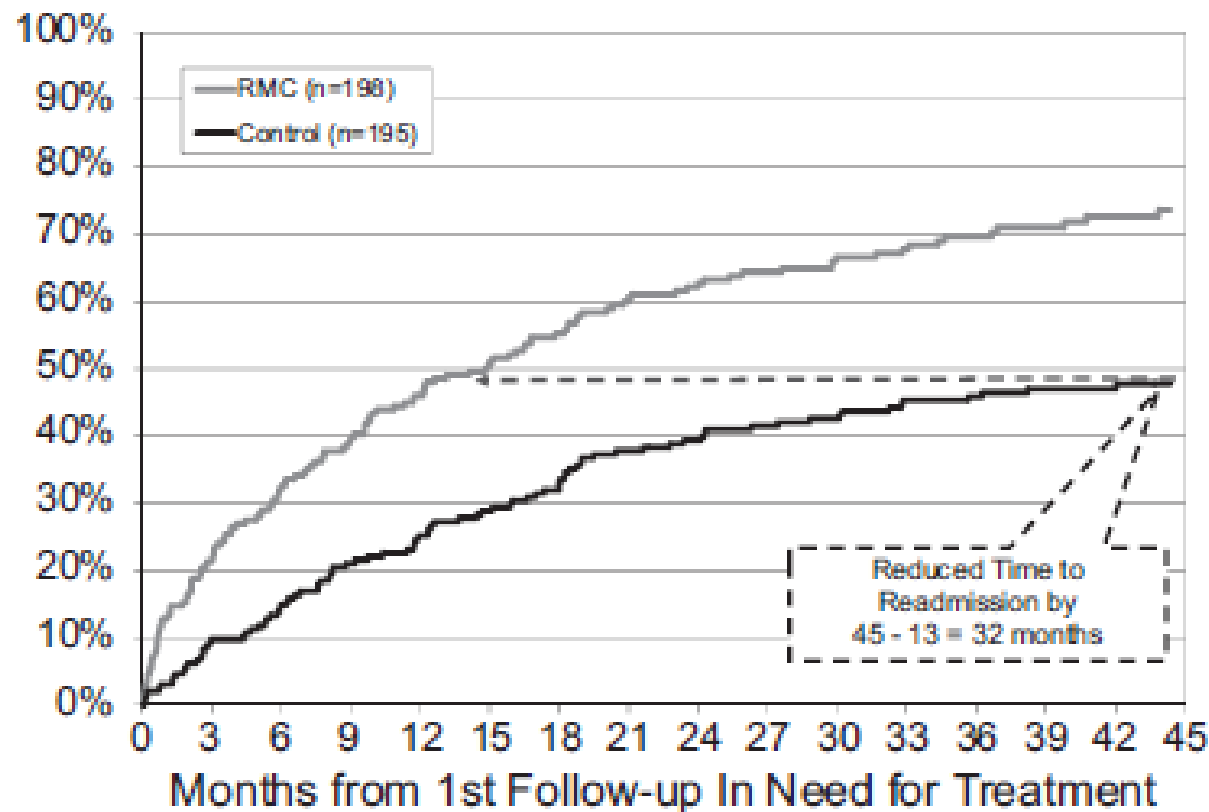
- Participants randomized to RMC were significantly more likely than control participants to:
  - Return to treatment at all (70 vs. 51%)
  - Return to treatment sooner (by 13 months vs. 45 months)
  - Receive more treatment (1.9 vs. 1.0 admissions and 112 vs. 79 total days of treatment)
- RMC participants also:
  - Needed treatment for significantly fewer quarters (7.6 versus 8.9 quarters)
  - Had more total days of abstinence (1026 versus 932 of 1350 days)
- Outcome Monitoring plus RMC generates less in societal costs than OM alone



# Results 1

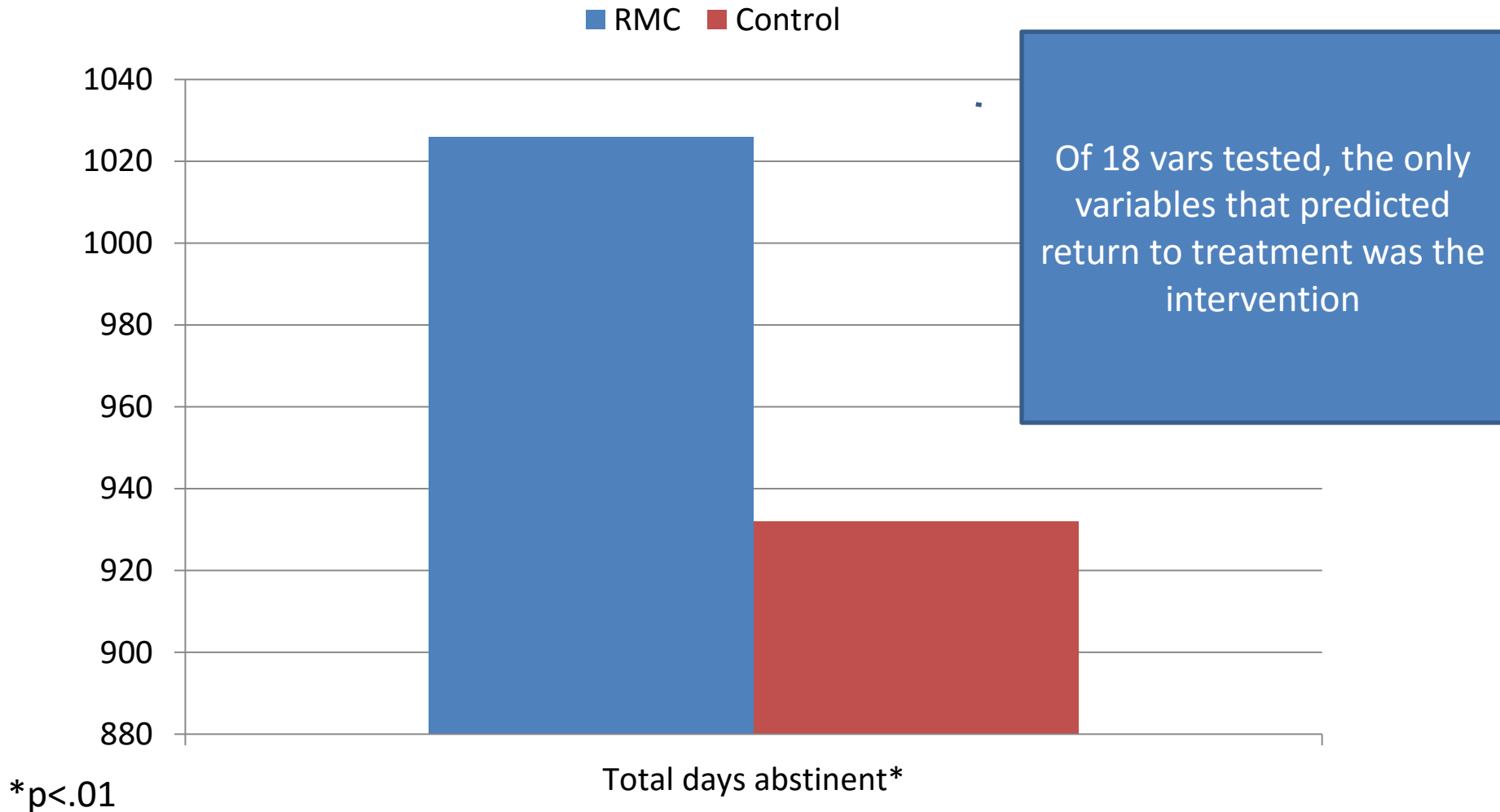
## Return to treatment

- Participants in RMC condition sig. more likely to return to treatment sooner



## Results 4

### Days abstinent (0-1350)



# Cost-effectiveness analysis of Recovery Management Checkups (RMC)

## Cost-effectiveness analysis of Recovery Management Checkups (RMC) for adults with chronic substance use disorders: evidence from a 4-year randomized trial

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### ABSTRACT

**Aims** This study performs the first cost-effectiveness analysis (CEA) of Recovery Management Checkups (RMC) for adults with chronic substance use disorders. **Design** Cost-effectiveness analysis of a randomized clinical trial of RMC. Participants were assigned randomly to a control condition of outcome monitoring (OM-only) or the experimental condition OM-plus-RMC, with quarterly follow-up for 4 years. **Setting** Participants were recruited from the largest central intake unit for substance abuse treatment in Chicago, Illinois, USA. **Participants** A total of 446 participants who were 38 years old on average, 54% male, and predominantly African American (85%). **Measurements** Data on the quarterly cost per participant come from a previous study of OM and RMC intervention costs. Effectiveness is measured as the number of days of abstinence and number of substance use-related problems. **Findings** Over the 4-year trial, OM-plus-RMC cost on average \$2184 more than OM-only ( $P < 0.01$ ). Participants in OM-plus-RMC averaged 1026 days abstinent and had 89 substance use-related problems. OM-only averaged 932 days abstinent and reported 126 substance use-related problems. Mean differences for both effectiveness measures were statistically significant ( $P < 0.01$ ). The incremental cost-effectiveness ratio for OM-plus-RMC was \$23.38 per day abstinent and \$59.51 per reduced substance-related problem. When additional costs to society were factored into the analysis, OM-plus-RMC was less costly and more effective than OM-only. **Conclusions** Recovery Management Checkups are a cost-effective and potentially cost-saving strategy for promoting abstinence and reducing substance use-related problems among chronic substance users.

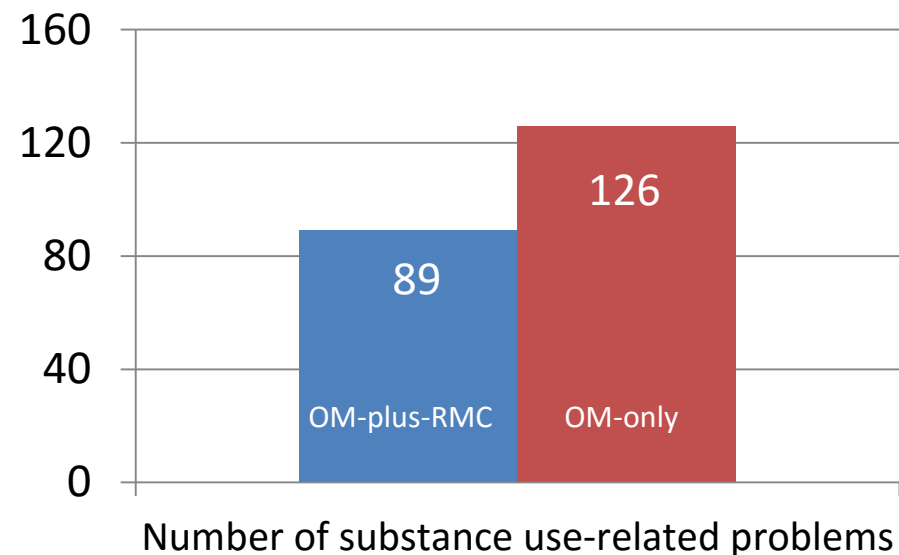
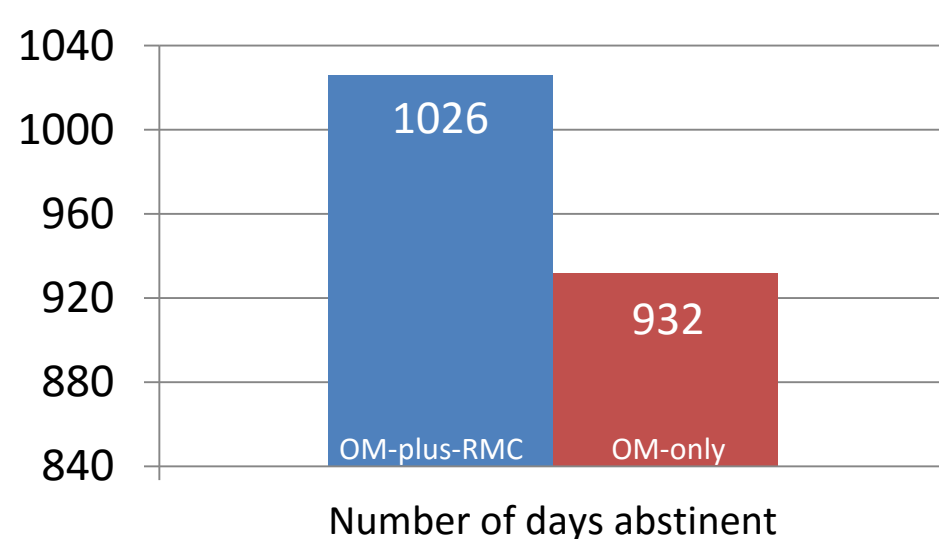
**Keywords** Chronic substance use disorder, cost-effectiveness analysis, economic evaluation, Recovery Management Checkups.

- **Sample:** 446 patients with substance use disorders residing in Illinois
- **Design:** Cost-effectiveness analysis using RCT data
- **Intervention:** Outcome monitoring (OM) plus RMC vs. OM-only
- **Follow-up:** 4 years
- **Outcome:** Cost per participant, number of days of abstinence, number of substance use-related problems



# Costs and Effectiveness Estimates

- Cost on average (per participant) to deliver:
  - OM-plus-RMC: \$4,889
  - OM-only: \$2,705



- Incremental effectiveness of OM-plus-RMC:
  - 94 additional days abstinent
  - 37 fewer substance use-related problems

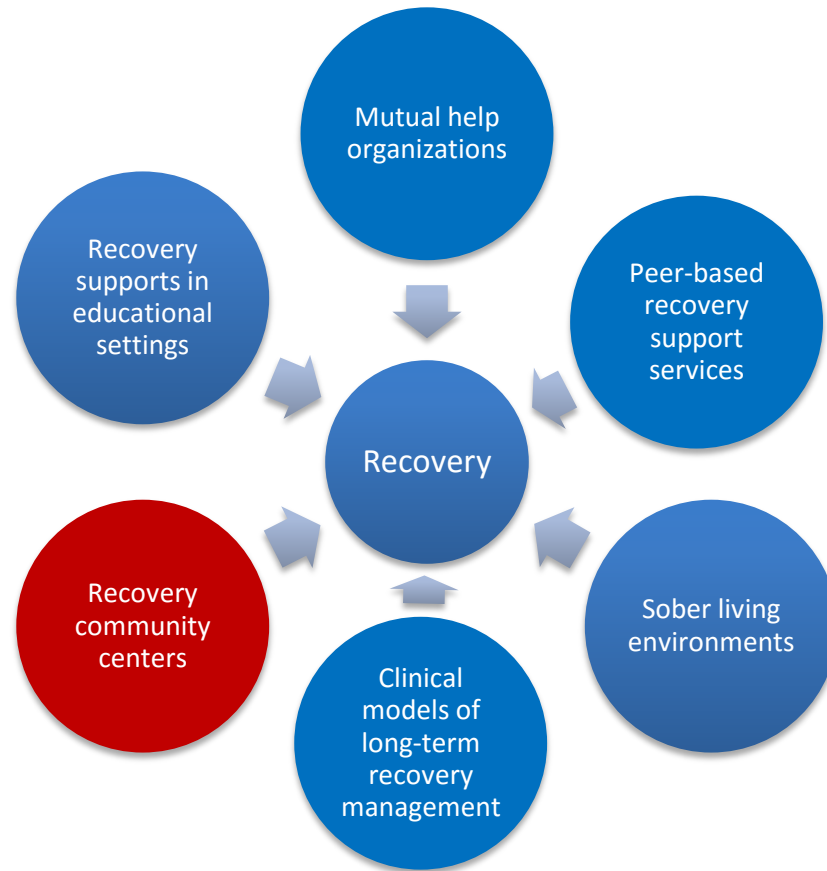
# Telephone-based Continuing Care

In an RCT of extended case monitoring:

- Time to first drink and time to first three heavy consecutive drinking days was significantly longer for patients receiving case monitoring compared to the usual continuing care
- Case monitoring produced a cumulative cost savings for outpatient chemical dependence costs of \$240.00 per person relative to usual continuing care



# Recovery Community Centers

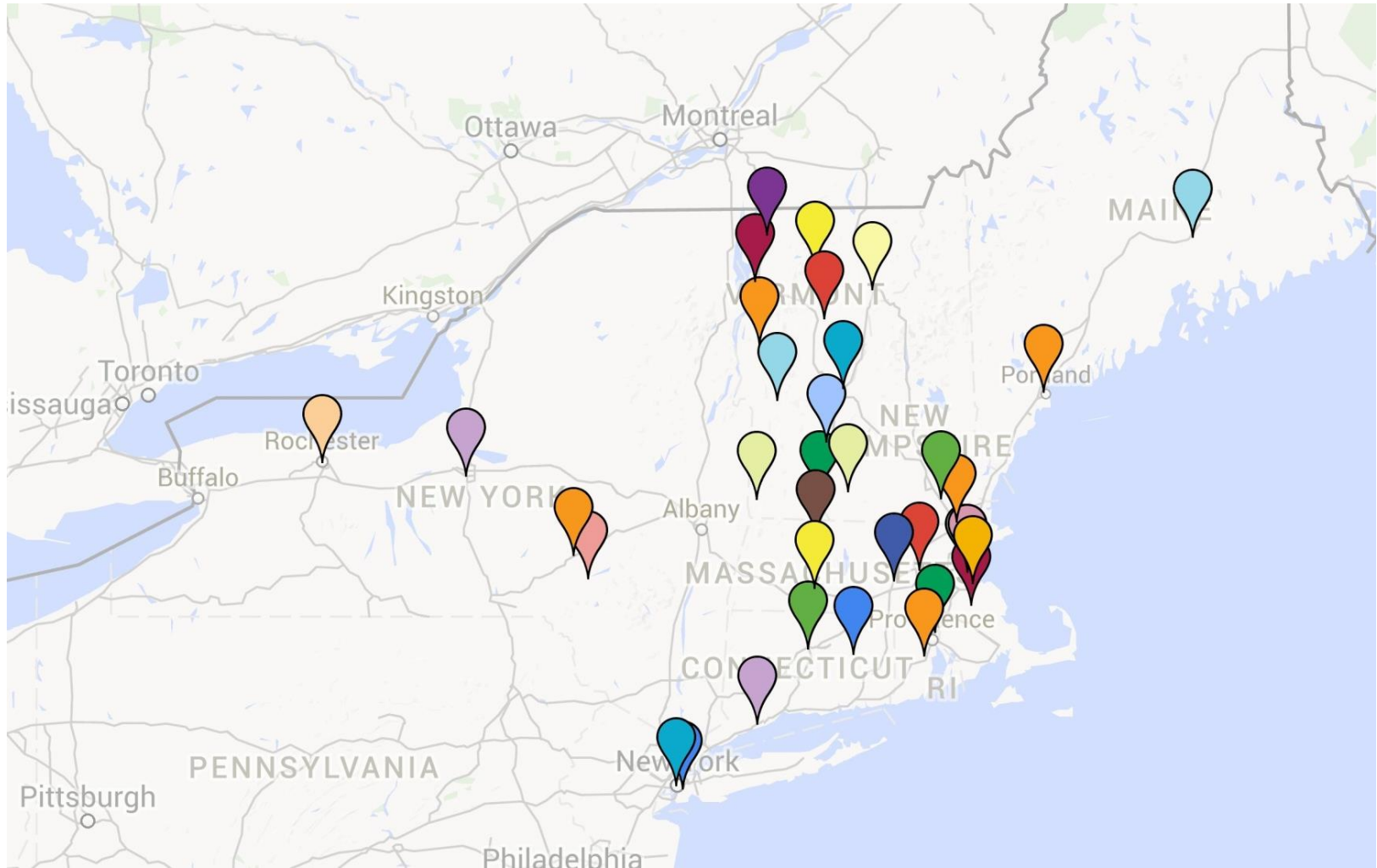


# RCCs in the United States



There are currently more than 80 centers operating nationally

# RCCs in New York and New England



# Recovery Community Centers

- Expected outcomes for individuals utilizing these services include:
  - Measured accomplishments, increased coping skills, continued recovery and turnaround time following relapse, and increased recovery capital (SAMHSA, 2011)
- Data from 11 Vermont RCCs found:
  - Participants attending recovery centers for longer periods of time reported longer periods of sobriety
  - 46% of individuals reported past criminal justice involvement prior to coming to the centers and no incidents since (Vermont Recovery Network, 2014).



# Recovery Supports In Educational Settings



# Recovery High Schools

- There are approximately 35 recovery high schools operating in 15 states
- A study of 17 recovery schools found that:
  - Students reported 266 days of abstinence since enrollment with continuous abstinence increasing from 20% during the 90 days before enrolling to 56% currently
  - Students' opinions of the schools were high with 87% reporting overall satisfaction (Moberg & Finch, 2008)
- A study of graduates of recovery schools found that 39% reported no drug or alcohol use in the last 30 days and over 90% had enrolled in college (Lanham & Tirado, 2011)



# Collegiate Recovery Programs

- There are almost 50 CRPs recognized by the Association of Recovery in Higher Education (ARHE)
- Data in two model programs suggests relapse rates are very low at approximately 4% to 13% in any given semester



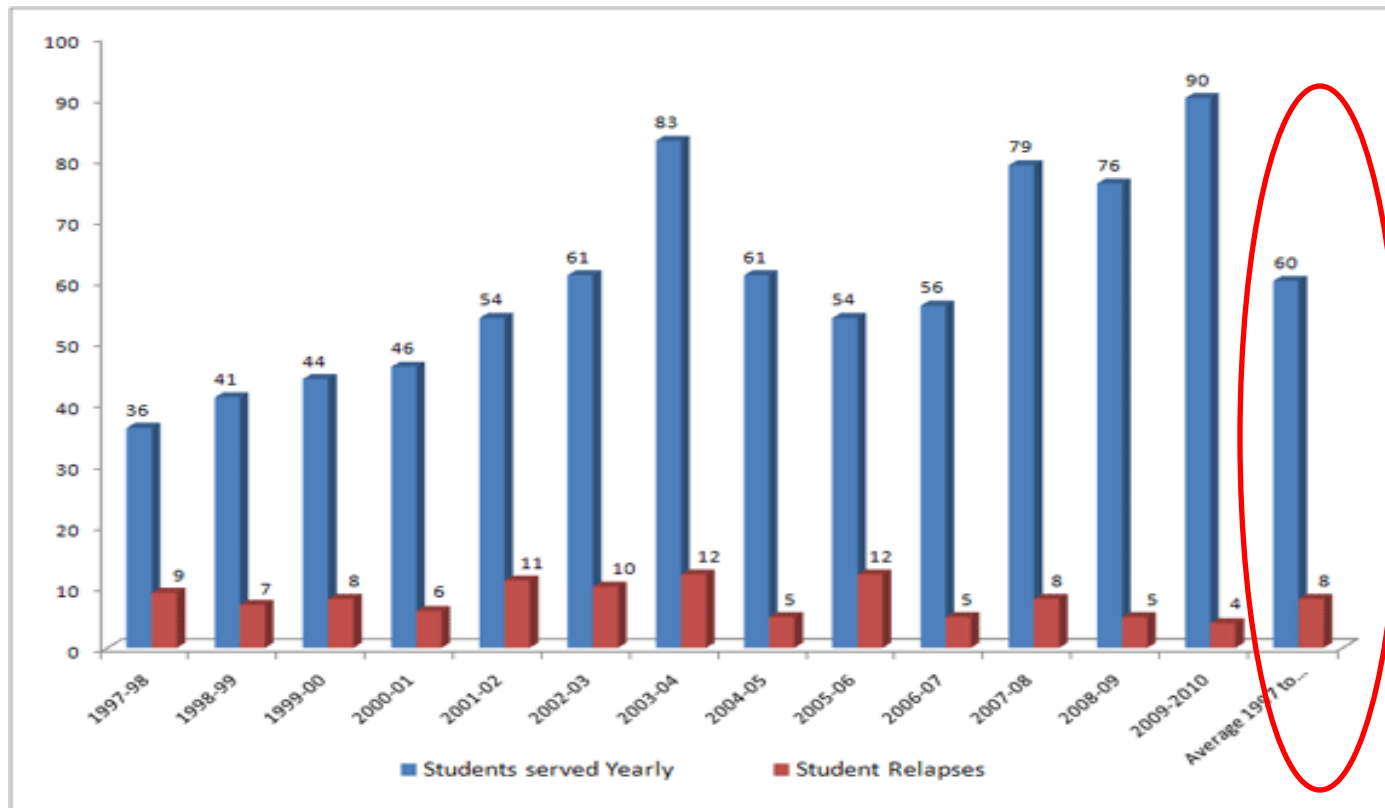
## Texas Tech University: Single group Pre-Post Design

- To enter the CRC, students need to have 1 year of recovery, attend at least 1 12-step on campus meeting per week, and succeed in their classes
- evaluation of the program: 2004-2005, N=82, (18-53 yrs old)
- relapse rate within a semester was 4.4%; most maintained high GPA

# Augsburg College StepUp program

- Support groups and sobriety-specific houses
- Outcomes...

Annual  
avg relapse  
rate  
across  
13 yrs = 13%,  
Down to about  
7% in recent yrs



# Rutgers Recovery House data 2008-2011

School yr, divided by semesters	Students Living in t	Relapse Number	Avg. Yearly Abst	Avg. Relapse	GPA	Graduated or Returned	Graduated or Return %	Alumni Participation	Graduated
2008, Fall	12	1.0	91.60%	8.40%	2.61	11	91.66%	N/A	7
2009, Spring & Summer	13	1.0	92.30%	7.70%	2.79	13	100.00%	6	8
2009, Fall	21	0.0	100.00%	0.00%	3.09	20	95.24%	23	10
2010, Spring & Summer	21	0.0	100.00%	0.00%	3.08	20	95.24%	17	11
2010, Fall	23	0.0	100.00%	0.00%	3.08	22	95.65%	29	4
2011, Spring	24	4.0	83.33%	16.67%	3.05	21 (as of 6/10/1	87.50%	33	4
Avg., Fall 08 to Spr 11	19	0.5	94.54%	5.45%	2.95	17.83	94.22%	21.6	16 total

\*Duplicated count as students continue year to year

Annual  
avg relapse  
rate  
across  
13 yrs = 6%

# Summary

## Recovery Process and Rationale for RSSs

- RSSs open up new pathways to recovery and can enhance and extend the effects of professionally-delivered care by....
  - Helping change social networks towards those that model and support recovery in the communities in which people live
  - Helping build resilience, buffer stress, and increase recovery coping, confidence and motivation over the long-term
  - Help individuals build further “recovery capital” by providing supports in high risk educational environments like colleges/high schools, providing linkages to employment opportunities, and health/social services
  - Providing ongoing recovery-specific support at little cost reducing burden on professional health services while enhancing remission rates, thereby reducing health care costs, and appear cost-effective and worthy of investment

THANK YOU FOR YOUR ATTENTION!



MASSACHUSETTS  
GENERAL HOSPITAL



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